very good yields, but there is an increase in the secondary products as the molecular weight of the acid is higher. Benzoic acid gives no benzophenone, but mixtures of benzoic and fatty acids give fair yields of the mixed fatty-aromatic ketones.—A. de **Gramont** was elected a member of the section of free academicians in succession to the late Alfred Picard.—J. **Guillaume**: Observation of the occultation of a star of the eighth magnitude by Jupiter made at the Observatory of Lyons.—J. **Guillaume**: A curious aspect of the third satellite of Jupiter. Instead of the usual round disc the satellite Ganymede presented a gibbous appearance recalling that of Mars at certain periods. Two illustrations of the satellite are given.—L. **Godeaux**: The classification of the involutions of genus 1 belonging to a surface of genus 1.—A. **Buhl**: Formulæ analogous to the formula of Stokes.—Th. **Got**: The fundamental domains of certain Fuchsian groups.—M. **Schwarz** and M. **Villatte**: The first determination of the difference of longitude by wireless telegraphy in western French Africa. The stations were Kissidougou and Conakry.—A. **Magnan**: Data for the construction of an ideal monoplane based on the flight of birds.—M. **Levavasseur** and M. **Gastambide**: An aëroparachute.—Eugène **Bloch**: The principle of an electrostatic motor. An ordinary quadrant electrometer is modified to serve as a motor.—M. de **Broglie**: The diffraction and reflection of the Röntgen rays.—Jacques **Carvallo**: The electrical conductivity of some pure liquids: ammonia, acetone, ethyl and methyl alcohol. The method used was to seal up the purified liquids in glass tubes furnished with electrodes, and apply a constant electromotive force. The liquid is purified by the action of the current, without, however, any electrolytic phenomena being observable, and the current is noted as a function of the time and voltage.—A. **Tian**: The determination of the order of a photochemical reaction. An attempt to elucidate the effect of absorption on the reaction velocity.—Eugène **Fouard**: A law of tonometry and its consequence as regards the ionic theory.—P. **Leroux**: Magnetic study of the constitution of some antimony alloys. Curves are given for the tin-antimony and lead-antimony alloys.—Daniel **Berthelot** and Henry **Gaudechon**: The photochemical synthesis of a new compound, carbon oxycyanide, by means of ultra-violet light. Mixtures of carbon monoxide and cyanogen are acted upon by ultra-violet light of wave-length less than 0·25μ, the gases combining in equal volumes. The substance formed is gaseous at about 100° C., and solid at the ordinary temperatures. An analysis, combined with a study of the reactions of this compound, shows that it is carbonyl cyanide, $CO(CN)_2$, analogous with carbonyl chloride.—F. **Bourion** and A. **Deshayes**: The quantitative separation of iron and chromium.—H. **Copaux**: The constitution of the para-molybdates and the para-tungstates.—Léon **Guillet**: The transformation points and the structure of nickel-chrome steels.—Jean **Nivière**: The preparation of diglyceric alcohol.—Marcel **Godchot** and Félix **Taboury**: Some derivatives of β-methyl*cyclo*pentanone. The preparation of the monochloro-derivative and some substances obtained from this are described.—A. **Guilliermond**: New observations on the chondriome of fungi.—D. **Chouchak**: The absorption of different forms of nitrogen by plants; the influence of the medium. The absorption of mineral or organic nitrogen by young wheat plants does not depend immediately upon the living material. It is determined by substances which are contained in the roots and which are not removed by boiling water.—R. **Argaud**: A directly excitable endocardiac region.—Jacques **Mawas**: Action of the traction of the zonule on the general configuration of the human crystalline lens. The possibility of flattening the periphery of the crystalline lens during accommodation.—Em. **Bourquelot** and H. **Hérissey**: The biochemical synthesis with the aid of emulsin of a glucoside isomeric with salacin. β-Salicylglucoside.—L. **Cayeux**: The meaning of mineral gravels included in the Hettangian iron deposits of Burgundy.—Jean **Groth**: The southern border of the Iberian Meseta.—Lucien **Mayet** and Joseph **Mazenot**: The discovery of a prehistoric cave of the Aurignacian age at Brancion (Saone-et-Loire). The cave showed three different archæological levels and a fairly uniform fauna of the middle Quaternary.

CAPE TOWN.

Royal Society of South Africa, April 16.—The president in the chair.—Miss E. L. **Stephens**: A new species of Hæmatoxylon (Leguminosæ-Cæsalpineæ) from Great Namaqualand. The discovery of a South African species of Hæmatoxylin is of particular interest, as the genus has hitherto been represented only by one species—*H. campecheanum*, L., the log-wood tree, a native of Mexico, Central America, the northern parts of South America, and the West Indies. The species here described was found among rocks near Holoog, in Great Namaqualand, by Dr. H. H. W. Pearson, in February, 1909, during the Percy Sladen Memorial Expedition in South-West Africa, 1908–9. It is a shrub, 1–1·5 metres high, and it differs from *H. campecheanum* by its shrubby habit, its more or less pilose and glandular young parts and inflorescence, its smaller leaves, its longer flowered and terminal inflorescence, its bilabiate calyx, and its longer petals and stamens. On a more recent expedition, Dr. Pearson has obtained some wood of this species, which has yielded the characteristic log-wood dye.—G. **Rattray**: Notes on the pollination of some South African Cycads. *Encephalartos Altensteinii*, Lehm., is pollinated by insect agency, the pollen bearer being a weevil belonging to the genus Phlæophagus. Anemophily may still occasionally occur in this species. *E. villosus*, Lehm., from its habitat and cone structure, appears to be exclusively entomophilous. No evidence of entomophily has been found in *Stangeria Katzeri*, Rgl.—R. A. **Dümmer**: A synopsis of the species of Lotononis and of Pleiospora.—T. **Muir**: Note on an overlooked theorem regarding the product of two determinants of different orders.—R. T. A. **Innes**: Note on the Newcomb operators used in the development of the perturbative function.

BOOKS RECEIVED.

Herpetologia Europaea. By Dr. E. Schreiber. Pp. 54. (Jena: G. Fischer.) 2 marks.

County Borough of Halifax. Bankfield Museum Notes. Second Series. No. 2, Ancient Egyptian and Greek Looms. By H. Ling Roth. Pp. 41+plate. (Halifax: F. King and Sons, Ltd.) 2*s*. 6*d*.

National Antarctic Expedition, 1901–4. Meteorology. Part ii. Prepared in the Meteorological Office, under the superintendence of M. W. C. Hepworth. Pp. 26+charts. (London: The Royal Society.)

Konstitutions-Formeln der organischen Chemie in graphischer Darstellung. By J. Loschmidt. Edited by R. Anschütz. Pp. 154. (Leipzig: W. Engelmann.) 5 marks.

Handwörterbuch der Naturwissenschaften. Edited by E. Korschelt and others. 43 and 44 Lief. (Jena: G. Fischer.) 5 marks each Lief.

Die Chemie als mathematisches Problem. By C. Mezger. Pp. 108. (Metz: G. Scriba.) 3 marks.

Das selbstgefertigte Lichtbild. By W. Dix. Pp. 70. (Leipzig: Quelle and Meyer.) 1 mark.

Ausländische Kultur- und Nutzpflanzen. By L. Trinkwalter. Pp. vi+120. (Leipzig: Quelle and Meyer.) 2.40 marks.

Methodik des chemischen Unterrichts. By Dr. K. Scheid. Pp. xv+448. (Leipzig: Quelle and Meyer.) 10 marks.

Probleme der physiologischen und pathologischen Chemie. By Dr. O. von Fürth. II. Band. Stoffwechsellehre. Pp. xiv+717. (Leipzig: F. C. W. Vogel.) 23 marks.

Guy Mannering, or the Astrologer. By Sir Walter Scott, with Introduction and Notes by J. H. Boardman. Pp. xxx+482. (London: A. and C. Black.) 2s.

Geological Survey of New Jersey. Bulletin 8: Annual Administrative Report of the State Geologist for the Year 1912, including a Second Report on Shark River Inlet, by C. C. Vermeule, and a List of New Bench Marks. Pp. 103. (Trenton, N.J.: MacCrellish and Quigley.)

Geological Survey of New Jersey. Bulletin 9: A Preliminary Report of the Archæological Survey of the State of New Jersey made by the Department of Anthropology in the American Museum of Natural History, compiled by A. Skinner and M. Schrabisch. Pp. 94+map. (Trenton, N.J.: MacCrellish and Quigley.)

Chemie, allgemeine Kristallographie und Mineralogie. By E. v. Meyer, C. Engler, L. Wöhler, O. Wallach and others. Pp. xiv+663. (Leipzig and Berlin: B. G. Teubner.) 21 marks.

Documents of British History, A.D. 1815–1900. By M. W. Keatinge and N. L. Frazer. Pp. 77. (London: A. and C. Black.) 8d.

Récits et Compositions d'après l'Image. By M. Anceau and E. Magee. Pp. 33+14 plates. (London: A. and C. Black.) 6d.

Zoology. By Prof. E. Brucker. Pp. xiii+219. (London: Constable and Co., Ltd.) 2s. net.

Department of the Interior. U.S. Geological Survey. Mineral Resources of the United States. Calendar Year 1911. Part i., Metals. Pp. 1018. Part ii., Non-Metals. Pp. 1224+maps. (Washington: Government Printing Office.)

Department of the Interior. U.S. Geological Survey. Water Supply Paper. 259, 293, 297, 300, 310, 311, 313, 316. (Washington: Government Printing Office.)

Department of the Interior. U.S. Geological Survey. Bulletin. 502, 503, 510, 521. (Washington: Government Printing Office.)

Mechanics and Heat. By J. Duncan. Pp. xiii+381. (London: Macmillan and Co., Ltd.) 3s. 6d.

Principles and Practice of School Gardening. By A. Logan. Pp. xv+313. (London: Macmillan and Co., Ltd.) 3s. 6d.

U.S. Department of Agriculture. Weather Bureau. Report of the Chief of the Weather Bureau, 1911–12. Pp. 272+4 charts. (Washington: Government Printing Office.)

DIARY OF SOCIETIES.

THURSDAY, JUNE 19.

ROYAL SOCIETY, at 4.30.—Atomic Specific Heats between the Boiling Points of Liquid Nitrogen and Hydrogen. I. The Mean Atomic Specific Heats at 50° Absolute of the Elements—a Periodic Function of the Atomic Weights: Sir James Dewar.—An Active Modification of Nitrogen produced by the Electric Discharge. V.: Hon. R. J. Strutt.—The Electrical Emissivity and Disintegration of Hot Metals: Dr. J. A. Harker and Dr. G. W. C. Kaye.—A Method of Measuring the Viscosity of the Vapours of Volatile Liquids, with an Application to Bromine: Dr. A. O. Rankine.—The Efficiency of Selenium as a Detector of Light: E. E. Fournier d'Albe.—The Hall Effect in Liquid Electrolytes: A. E. Oxley.—The Displacements of the Particles and their Paths in Some Cases of Two-dimensional Motion of a Frictionless Liquid: Prof. W. B. Morton.—The Diurnal Variations of the Earth's Magnetism produced by the Moon and Sun: S. Chapman.—The Electric Effect of Rotating a Magnetic Insulator in a Magnetic Field: Prof. H. A. Wilson and Marjorie Wilson.—The Magnetic Materials in Claywares: A. Hopwood.—Synthesis of the Anhydrides of α Aminoacyl Glucosamines: A. Hopwood and C. Weizmann.—The Flexure of Telescope Mirror-discs arising from their Weight, and its Influence upon Resolving Power: H. S. Jones.—(1) Fourier Series and Functions of Bounded Variation; (2) A Condition that a Trigonometrical Series should have a certain Form; (3) Trigonometrical Series the Cesaro Partial Summations of which Oscillate Finitely: Prof. W. H. Young.

LINNEAN SOCIETY, at 8.—Impressions of the Feeding-tracks of *Limax maximus* and *Helix aspersa*: Mrs. Longstaff.—African Species of the Genus Crotalaria: E. G. Baker.—Aphareocaris, nom. nov. (Aphareus; Paulson), a Genus of the Crustacean Family Sergestidæ: Dr. W. T. Calman.—Water-colour Drawings of Australian and South African Plants: Miss Fuller.—An Anatomical Study of the Cone-genus Lepidostrobus: Dr. Agnes Arber.—Fresh-water Rhizopoda from North and South America: G. H. Wailes.—A Revision of the Genus Symphytum, Tourn.: Cedric Bucknall.—Some New British Plants: Dr. C. E. Moss.

MONDAY, JUNE 23.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—A Geographical Excursion across the United States: G. Chisholm, H. O. Beckit, and A. G. Ogilvie.

WEDNESDAY, JUNE 25.

GEOLOGICAL SOCIETY, at 8.—The Miocene Beds of the Victoria Nyanza and the Geology of the Country between the Lake and the Kisii Highlands: Dr. F. Oswald.

BRITISH ASTRONOMICAL ASSOCIATION, at 5.

THURSDAY, JUNE 26.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Light Sensations and the Theory of Forced Vibrations: Dr. G. J. Burch.—The Fluctuation in the Ionisation due to γ Rays: P. W. Burbidge.—The Force Exerted on a Magnetic Particle by a Varying Electric Field: J. G. Leathem.—The Luminosity Curve of a Colour-blind Observer: Dr. W. Watson.—A Critical Study of Spectral Series. Part iii. The Atomic Weight Term, and its Import in the Constitution of Spectra: Prof. W. M. Hicks.—A Band Spectrum attributed to Carbon Monosulphide: L. C. Martin.—Phosphorescence of Mercury Vapour after Removal of the Exciting Light: F. S. Phillips. *And other Papers.*

FRIDAY, JUNE 27.

PHYSICAL SOCIETY, at 5.

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