

Numériques: Données Numériques de Biologie, Biochimie, Chimie Physique Biologique, Physiologie, Microbiologie, Pharmacodynamie. By E. F. Terroine. Pp. xi+20. Cristallographie et de Minéralogie. By L. J. Spencer. Pp. viii+425-446. Radioactivité Atomistique. Electronique et Ionisation. By J. Saphores and F. Bourion. Pp. viii+295-307. Spectroscopie. By Dr. L. Brüninghaus. Pp. viii+165-238. L'Electricité, Magnétisme et Electrochimie. By Profs. P. Dutoit and W. C. McC. Lewis, and Dr. A. Mahlke. Pp. ix+258-417. Art de l'Ingénieur et Métallurgie. By S. L. Archbutt and others. Pp. viii+510-600. (Paris: Gauthier-Villars et Cie.)

The Hydrogenation of Oils, Catalyzers, and Catalysis, and the Generation of Hydrogen. By C. Ellis. Pp. x+340. (London: Constable and Co., Ltd.) 16s. net.

Catalogue of Scientific Papers. Fourth Series (1884-1900). Compiled by the Royal Society of London. Vol. xiv., C—Fittig. Pp. 1024. (Cambridge University Press.) 2l. 10s. net.

The Extra Pharmacopœia of Martindale and Westcott. Revised by Dr. W. H. Martindale and W. Wynn Westcott. Sixteenth edition. In 2 vols. Vol. 4., pp. xl+1113. Vol. ii., pp. viii+469. (London: H. K. Lewis.) Vol. i., 14s. net; vol. ii., 7s. net.

Mathematical Papers for Admission to the Royal Military Academy and the Royal Military College for the Years 1905-14. Edited by R. M. Milne. (London: Macmillan and Co., Ltd.) 6s.

The Next Generation. By F. G. Jewett. Pp. xi+235. (Boston, New York, Chicago, London: Ginn and Co.) 3s. 6d.

DIARY OF SOCIETIES.

THURSDAY, FEBRUARY 18.

ROYAL SOCIETY, at 4.30.—Gaseous Combustion at High Pressures: Prof. W. A. Bone and Others.—The Orbits of a Charged Particle Round an Electric and Magnetic Nucleus; Prof. W. M. Hicks.—The Lunar Diurnal Magnetic Variation and its Change with Lunar Distance; S. Chapman.—Some Temperature Refraction Coefficients of Optical Glass: Lt.-Col. J. W. Gifford.

ROYAL INSTITUTION, at 3.—Struggle of Species: Dr. P. Chalmers Mitchell. LINNEAN SOCIETY, at 5.—The Action of Light upon Chlorophyll: H. Wager.

INSTITUTION OF PETROLEUM TECHNOLOGISTS, at 8.—The "Cracking" of Oils, with a View to Obtaining Motor Spirit and other Products: W. A. Hall.

INSTITUTION OF MINING AND METALLURGY, at 8.—Notes on some Gold Occurrences in Ashanti: J. Morrow Campbell.—Some Features in the Mining Problems of the East Witwatersrand Area: W. G. Holford.—Prospecting Tin Land in Malaya: W. B. Middleton.

FRIDAY, FEBRUARY 19.

ROYAL INSTITUTION, at 9.—The Visit of the British Association to Australia: Prof. H. E. Armstrong.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Annual General Meeting.—Convertible Combustion Engines: A. E. L. Chorlton.

SATURDAY, FEBRUARY 20.

ROYAL INSTITUTION, at 3.—Recent Researches on Atoms and Ions: Sir J. J. Thomson.

MONDAY, FEBRUARY 22.

ROYAL SOCIETY OF ARTS, at 8.—Motor Fuels: Prof. Vivian B. Lewes. INSTITUTE OF ACTUARIES, at 5.—Practical Points in Connection with the Formation and Valuation of Pension Funds, with a note on Group Assurances: J. Burn and F. P. Symmons.

TUESDAY, FEBRUARY 23.

ROYAL INSTITUTION, at 3.—Muscle in the Service of Nerve: Prof. C. S. Sherrington.

ZOOLOGICAL SOCIETY, at 5.30.—(1) Abnormal Gills in the Starfish, *Porania pulchra* O.F.M. (2) The Ciliation of Asterids, and the Question of Ciliary Nutrition in Certain Species: Dr. J. F. Gemmill.—The Methods of Feeding and the Mouth-parts of the Larva of the Glow-worm (*Lampyrus noctiluca*): Miss Kathleen Haddon.—Descriptions of New Fossorial Wasps from Australia: R. E. Turner.—Notes on a small Collection of Heterocera made by Mr. W. Feather in British East Africa, 1911-12: Lt.-Col. J. M. Fawcett.

ROYAL ANTHROPOLOGICAL INSTITUTE, Joint Meetings with THE PREHISTORIC SOCIETY OF EAST ENGLAND, at 2.30, at the Royal College of Surgeons.—Papers by members of the Prehistoric Society; at 8.15.—Ouse Valley Cultures: Charles Dawson.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Electrolytic Action of Return Currents in Electric Tramways on Gas and Water-Mains, and the Best Means of Providing against Electrical Disturbances: H. E. Yerbury.

WEDNESDAY, FEBRUARY 24.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Africa after the War: Sir Harry H. Johnston.

NO. 2364, VOL. 94]

ROYAL SOCIETY OF ARTS, at 8.—The Economics of the War: Prof. W. J. Ashley.

GEOLOGICAL SOCIETY, at 8.—The Ashgillian Succession in the Tract to the West of Coniston Lake: Dr. J. E. Marr.—The Radioactive Methods of Determining Geologic Time: H. S. Shelton.

THURSDAY, FEBRUARY 25.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Effect of the Depth of Pulmonary Ventilation on the Oxygen in the Venous Blood of Man: J. F. Twort and Prof. L. Hill.—The Function of Chlorophyll: Dr. A. J. Ewart.—Contributions to the Study of the Bionomics and Reproductive Processes of the Foraminifera: E. Heron-Allen.—The Influence of the Hydrogen Concentration upon the Optimum Temperature of a Ferment: A. Compton.

ROYAL INSTITUTION, at 3.—Struggle of Nations: Dr. P. Chalmers Mitchell. CHILD STUDY SOCIETY, at 6.—*Discussion*: The Care and Development of the Child—from Ante-Natal Period to Five Years of Age. Ante-Natal Period: Dr. G. Eric Pritchard; Infancy: Miss J. Halford; One to Five Years: Dr. D. Forsyth.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Electricity applied to Mining: C. P. Sparks.

FRIDAY, FEBRUARY 26.

ROYAL INSTITUTION, at 9.—Solar Eclipse of 1914: The Rev. A. L. Cortie.

SATURDAY, FEBRUARY 27.

ROYAL INSTITUTION, at 3.—Recent Researches on Atoms and Ions: Sir J. J. Thomson.

CONTENTS.

	PAGE
Vital Statistics	665
Technical Methods of Chemical Analysis. By T. Cole	665
Two Books on the Earth. By Prof. Grenville A. J. Cole	666
Mathematical Text-Books	667
Our Bookshelf	668
Letters to the Editor:—	
Fine Chemicals for Research Purposes.—Prof. H. B. Baker, F.R.S.; Prof. J. F. Thorpe, F.R.S.; M. A. Whiteley	670
A Penalty on Research.—Prof. Sydney J. Hickson, F.R.S.	670
The Prices of Chemicals.—J. J.; A Firm of Dealers in Chemicals	670
British Supplies of Laboratory Ware.—C. A. Mercer	670
Problems of Radiation. (<i>With Diagram</i>).—Prof. C. G. Barkla, F.R.S.	671
The Green Flash.—Prof. Alfred W. Porter, F.R.S.	672
Trenching Ground and Spraying Potatoes.—Spencer Pickering, F.R.S.	672
Early Representations of the Giraffe. (<i>Illustrated</i>).—Dr. C. R. Eastman	672
The Economic Status of the Blackcap.—Alfred O. Walker; Walter E. Collinge	673
The Rusting of Iron.—E. J. Sumner	673
Star Clusters. (<i>Illustrated</i>). By Prof. H. C. Plummer	674
On Colour Sensitised Plates.—I. (<i>Illustrated</i>). By Chapman Jones	676
Whaling in Southern Seas. (<i>Illustrated</i>).	678
Chemistry and Industry. By Prof. Jocelyn Thorpe, F.R.S.	679
Notes	680
Our Astronomical Column:—	
A New Comet, 1915a (Mellish)	685
The Zodiacal Light	685
Astronomy and Mathematics	685
The Madrid Observatory's Annual for 1915	685
What is Gravitation?	685
Eugenics and War	686
Standardising Apparatus and Methods	687
Gaseous Explosions. By Dr. Dugald Clerk, F.R.S.	687
Climate and Trees	688
University and Educational Intelligence	689
Societies and Academies	690
Books Received	691
Diary of Societies	692

Editorial and Publishing Offices:

MACMILLAN & CO., LTD.,
ST. MARTIN'S STREET, LONDON, W.C.

Advertisements and business letters to be addressed to the Publishers.

Editorial Communications to the Editor.

Telephone Number: GERRARD 8830.
Telegraphic Address: PHUSIS, LONDON.