

series isolated by Fowler are strictly analogous to principal series in line-spectra; (3) the generalised Rydberg formula, in which the wave number is a function of $m + \mu$, gives the most suitable representation of these series as well as of line-series.—C. Dobell and A. P. Jameson: The chromosome cycle in Coccidia and Gregarines. The authors have investigated the chromosomes of a coccidian (*Aggregata eberthi*) and a gregarine (*Diplocystis schneideri*). They have found that the chromosomes are present in the haploid ("reduced") number—six in *Aggregata*, three in *Diplocystis*—at every nuclear division in the life-history except that of the zygote nucleus. This nucleus contains the diploid number of chromosomes—twelve in *Aggregata*, six in *Diplocystis*—and its division is a reduction division which halves the chromosome number. Reduction thus occurs in these organisms immediately after fertilisation, and not during gametogenesis.

Mathematical Society, June 10.—Sir Joseph Larmor president, in the chair.—Prof. W. Burnside: Periodic irrotational waves at the surface of deep water.—Prof. M. Kuniyeda: A theorem on series of orthogonal functions.—G. R. Goldsbrongh: The effect on the tides of the variation in the depth of the sea.—Prof. D. Buchanan: Oscillations near an isosceles triangle solution of the problem of three bodies, as the finite masses become unequal.

BOOKS RECEIVED.

The General Theory of Dirichlet's Series. By G. H. Hardy and Dr. M. Riesz. Pp. 78. (Cambridge: At the University Press.) 3s. 6d. net.

The Soul of the War. By P. Gibbs. Pp. 362. (London: W. Heinemann.) 10s. 6d. net.

Elementary Experimental Statics. By I. B. Hart. Pp. vii+200. (London: J. M. Dent and Sons, Ltd.) 2s. 6d.

The People of India. By Sir H. Risley. Second edition. Edited by W. Crooke. Pp. xxxii+472+plates xxxv. (Calcutta: Thacker, Spink and Co.; London: W. Thacker and Co.) 21s. net.

Making the Most of Life. By Prof. M. V. O'Shea and J. H. Kellogg. Pp. ix+298. (New York: The Macmillan Company; London: Macmillan and Co., Ltd.) 3s. 6d.

The Statesman's Year-Book, 1915. Edited by Dr. J. Scott Keltie, assisted by Dr. M. Epstein. Pp. lxxxiv+1536. (London: Macmillan and Co., Ltd.) 10s. 6d. net.

Petroleum Technologist's Pocket-Book. By Sir B. Redwood and A. W. Eastlake. Pp. xxiv+454. (London: C. Griffin and Co., Ltd.) 8s. 6d. net.

Refuse Disposal. By Prof. E. R. Matthews. Pp. xiii+160. (London: C. Griffin and Co., Ltd.) 6s. net.

The Tokyo Imperial University Calendar, 1913-14. Pp. vi+349. (Tokyo: Maruya and Co.)

DIARY OF SOCIETIES.

THURSDAY, JUNE 17.

ROYAL SOCIETY, at 4.30.—Analyses of Agricultural Yield. II. The Sowing-date Experiment with Egyptian Cotton, 1913: W. L. Balls and F. S. Holton.—Soil Protozoa and Soil Bacteria: E. J. Russell.—The Enhanced Series of Lines in Spectra of the Alkaline Earths: Prof. W. M. Hicks.—Certain Linear Differential Equations of Astronomical Interest: Prof. H. F. Baker.—The Partial Correlation-Ratio: Prof. Karl Pearson.—The Effect of Temperature on the Hissing of Water when flowing through a Constricted Tube: S. Skinner and F. Entwistle.—Ionisation Potentials of Mercury Cadmium and Zinc and the Single and Many-lined Spectra of these Elements: J. C. McLennan and J. P. Henderson.—A Diagram to Facilitate the Study of External Ballistics: Prof. W. E. Dalby.—The Monoclinic Sulphates containing Ammonium. Completion of the Double Sulphate Series: Dr. A. E. H. Tutton.—And other papers.

NO. 2381, VOL. 95]

LINNEAN SOCIETY, at 5.—Colonel Montagu, Naturalist: Bruce Cummings.—The Fibre of *Calotrohis provera*, and the Cultivation of the Plant from an Economic Point of View: Dr. George Henderson.—The Structure of the Rhizopod Test: John Hopkinson.—Medusæ from the Indian Ocean, collected in 1905: E. T. Browne.—Report on the Hexactinellid Sponges (Triaxonida) collected by H.M.S. *Sealark* in the Indian Ocean: Prof. A. Dendy.—The Cephalopoda obtained by the Percy Sladen Trust Expedition to the Indian Ocean in 1905: J. C. Robson.

MONDAY, JUNE 21.

VICTORIA INSTITUTE, at 4.30.—Annual Address: The Unity of Genesis, Prof. H. Edouard Naville.

WEDNESDAY, JUNE 23.

GEOLOGICAL SOCIETY, at 8.—A New Eurypterid from the Belgian Coal Measures: Prof. Xavier Stainier.—A Fossiliferous Limestone from the North Sea: R. B. Newton.—The Origin of the Tin-ore Deposits of Kinta District, Perak (Federated Malay States): W. R. Jones.

FRIDAY, JUNE 25.

PHYSICAL SOCIETY, at 5.—A Theory of the Electrical Resistance of Metals: Sir J. J. Thomson.—An Unbroken Alternating Current for Cable Telegraphy: Lt.-Col. Squier.

CONTENTS.

PAGE

The Mobilisation of Science 419
 Modern Electrical Theory. By N. B. 420
 Horticulture and Botany 421
 Manuals of Physics 423
 Evolutionary Medicine. By R. T. H. 424
 Our Bookshelf 424
 Letters to the Editor:—
 Surface Tension and Ferment Action.—Dr. E. F. Armstrong; Prof. H. E. Armstrong, F.R.S. 425
 Training for Scientific Research.—Dr. T. S. Patterson 425
 Galileo and the Principle of Similitude.—Prof. D'Arcy W. Thompson, C.B. 426
 The Names of Physical Units.—Dr. Ch. Ed. Guillaume; Dr. J. A. Harker, F.R.S. 427
 University Appointments in War Time.—Prof. Percy F. Frankland, F.R.S. 428
 Volunteers for Scientific Work.—Edward Heron-Allen 428
 Scientific Methods in Industry. By W. P. Dreaper 428
 Hampshire Field Archæology. (Illustrated.) By Lieut. W. E. Rolston 430
 Cotton for German Ammunition. By Sir William Ramsay, K.C.B., F.R.S. 432
 Mr. F. H. Neville, F.R.S. 432
 Notes 432
 Our Astronomical Column:—
 Behaviour of Spectrum Lines of the Same Series . . . 437
 The Fisher, Polk County, Minnesota, Meteorite . . . 437
 The Nantucket Maria Mitchell Association 437
 Recent Bulletins of the Astronomical Society of France 437
 Iron, Carbon, and Phosphorus. By Prof. H. C. H. Carpenter 438
 The Seismological Society of America. By Dr. C. Davison 439
 Indian Geodesy. By H. G. L. 439
 The Fly Problem 440
 Jamaica as a Centre for Botanical Research in the Tropics. By M. D. 440
 The American Philosophical Society 442
 University and Educational Intelligence 445
 Societies and Academies 445
 Books Received 446
 Diary of Societies 446

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.

Telegraphic Address: PHUSIS. LONDON.

Telephone Number: GERRARD 8830.