

air-waves of the East London explosion of January 19, 1917. This is the complete report of the facts collected on the occasion of the East London explosion on January 19, 1917 (see NATURE, February 1, 1917, p. 438, and August 2, 1917, p. 450, in which the main conclusions were anticipated).—Sir Thos. Muir: The quadratic relations between the determinants of a 4-by-8 array. The main idea of the paper was to develop a convenient notation to facilitate the analytical use of these arrays.

CAPETOWN.

Royal Society of South Africa, April 17.—Dr. J. D. F. Gilchrist, president, in the chair.—Dr. J. D. F. Gilchrist: Luminosity in a South African earthworm and its origin. Luminous earthworms are found on the slopes of Table Mountain. The luminosity proceeds from a discharge from the mouth and anus, which consists of cells heavily laden with inclusions of different kinds. The smaller inclusions consist of a substance allied to fat, by the oxidation of which the light is produced. The cells arise from the body cavity, and are discharged into the anterior and posterior parts of the alimentary canal by definite communications between the coelom and alimentary tract.—Sir Thomas Muir: Note on the adjugate of Bezout's eliminant of two binary quatics.—I. B. P. Evans and Averil M. Bottomley: The genera *Diplocystis* and *Broomeia*. Some specimens of *Diplocystis* have recently been obtained by the authors from Portuguese East Africa, and this is the first recorded occurrence of the interesting genus from Africa. The African material is not identical with that from Cuba, and the authors describe it as *Diplocystis Junodii*, nov. spec.—Ethel M. Doidge: South African Perisporiaceae, ii. Revisional notes. This communication consists of a revision, due to work on a number of fresh collections of South African Perisporiaceae, of a previous communication on the subject by the author.—F. G. Cawston: Fresh-water snails as a cause of parasitic diseases. The author describes a number of snails collected by him from various districts in South Africa, and found to be infested with the cercarial stages of the various trematode worms.—J. Moir: Colour and chemical constitution, part iv. The remaining phthaleins. The absorption spectra of complex phthaleins are described, these being partly duplex compounds of the phenol-anthrol type and partly of a new class (e.g. thymol-naphthol) derived from thymoylbenzoic acid. The additive nature of the effects of different substitutions is emphasised by means of a table giving the numerical value of the change of wave-length for different substituting groups.

BOOKS RECEIVED.

The Chemical Analysis of Iron: By A. A. Blair. 8th edition. Pp. 318. (Philadelphia and London: J. B. Lippincott Co.) 21s. net.

Fisheries of the North Sea. By N. Green. Pp. vii + 178. (London: Methuen and Co., Ltd.) 4s. 6d. net.

Map Work. By V. S. Bryant and T. H. Hughes. Pp. 174. (Oxford: Clarendon Press.) 5s. net.

Is Man the Product of Evolution? By S. J. Whitmee. Pp. 24. (London: Headley Bros, Ltd.) 6d. net.

Wayfarings: A Record of Adventure and Liberation in the Light of the Spirit. By W. J. Jupp. Pp. 234. (London: Headley Bros., Ltd.) 6s. net.

Methods of Measuring Temperature. By Dr. E. Griffiths. Pp. xi + 176. (London: C. Griffin and Co., Ltd.) 8s. 6d. net.

NO. 2538, VOL. 101]

DIARY OF SOCIETIES.

THURSDAY, JUNE 20.

ROYAL SOCIETY, at 4.30.—Croonian Lecture: The Physiological Basis of Thirst: Major W. B. Cannon.

LINNEAN SOCIETY, at 5.—Les espèces d'Alpehidae rapportées par M. J. Stanley Gardiner de l'Océan Indien: Prof. H. Coutière.—(1) A Selection of Ferdinand Bauer's Landscapes, c. 1784. (2) Ten British Plants: G. Claridge Druce.—Exhibition of Lantern-slides representing a Series of Intermediate Forms of the Diatom Genera *Navicula* and *Cymbella*: Sir Nicolas Vermoloff.—Sex-segregation in the Bryophyta: E. J. Collins.—Phenological Observations in an Elementary School: A. O. Walker.

ROYAL SOCIETY OF ARTS, at 4.30.—Indian Cotton and the Cotton-mill Industry: The Hon. Sir Dinshaw E. Wacha.

MONDAY, JUNE 24.

ARISTOTELIAN SOCIETY, at 8.—The Moral Argument for Theism: Rev. W. R. Matthews.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Address by the Hon. Arthur Meighen, Canadian Minister of the Interior, attending the Imperial Conference.

TUESDAY, JUNE 25.

ROYAL ANTHROPOLOGICAL INSTITUTE, at 5.—Sociology of the East Coast People, Formosa: S. Ishii.

AERONAUTICAL SOCIETY (Central Hall, Westminster), at 8.—Wilbur Wright Memorial Lecture: Some Outstanding Problems in Aeronautics: Prof. W. F. Durand.

THURSDAY, JUNE 27.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: Periodic Irrotational Waves of Finite Height: Prof. T. H. Havelock.—The Diffraction of Electric Waves by the Earth: Dr. G. N. Watson.—Concerning Emotive Phenomena. II.: Periodic Variations of Conductance of the Palm of the Human Hand: Dr. A. D. Waller.—The Mechanism and Control of Fibrillation in the Mammalian Heart: Prof. J. A. MacWilliam.—The Development of the Sea Anemones, *Actinotoba dianthus* and *Adamsia palliata*: Dr. J. F. Gemmill.—The Occurrence of Multinucleate Cells in Vegetative Tissues: R. Beer and Agnes Arber.—The Epithelial Sheath of Hertwig in the Teeth of Man, with Notes on the Follicle and Nasmyth's Membrane: Dr. J. H. Mummery.—*And other Papers*.

FRIDAY, JUNE 28.

PHYSICAL SOCIETY, at 5.—A New Method of Measuring Alternating Currents and Electric Oscillations: I. Williams.—Demonstration of Coupled Vibrations: Prof. E. H. Barton and Miss H. M. Browning.

CONTENTS.

PAGE

Masonry Dams and Irrigation Wcrk. By Dr. Brysson Cunningham	301
Medical Electricity. By A. C. J.	302
Industrial Welfare and Health	302
Our Bookshelf	303
Letters to the Editor:—	
The Food of the Rook.—Dr. Sydney H. Long;	
The Writer of the Note	304
A Proof that any Aggregate can be Well-ordered.—	
Philip E. B. Jourdain	304
Construction for an Approximate Quadrature of the	
Circle.—Glenny Smeal; David Baxandall	304
Inter-Allied Scientific Food Commission	304
The New Star in Aquila	306
The New System of Time-keeping at Sea. By	
Dr. A. C. D. Crommelin	307
Damascene Steel. By H. C. H. C.	308
Notes	309
Our Astronomical Column:—	
Nebulosity in Star Clusters	314
Interpretation of Stellar Types	314
The Strathmore Meteorite	314
The South-Eastern Union of Scientific Societies	314
The Treatment of Malaria. By Capt. F. W. O'Conor	315
Scientific Problems of Disabled Soldiers	316
Climatology of Paris	316
The Story of a Grass. By Dr. A. B. Rendle, F.R.S.	317
University and Educational Intelligence	318
Societies and Academies	318
Books Received	320
Diary of Societies	320

Editorial and Publishing Offices:

MACMILLAN AND CO., LTD.,
ST. MARTIN'S STREET, LONDON, W.C.2.

Advertisements and business letters to be addressed to the
Publishers.

Editorial Communications to the Editor.

Telegraphic Address: PHUSIS, LONDON.
Telephone Number: GERRARD 830.