

Lancashire and Suffolk. By A. J. Swinburne. Pp. 274. (Saxmundham: The Author; and London: McDougall's Educational Company, Ltd.) 2s. 6d. net.

Microbiology for Agricultural and Domestic Science Students. Edited by Prof. C. E. Marshall. Pp. xxi+724. (London: J. and A. Churchill.) 10s. 6d. net.

The Metallurgy of Steel. By F. W. Harbord and J. W. Hall. 2 vols. Fourth edition. Vol. i. Pp. xvi+522+xxix. Vol. ii. Pp. xviii+523-933+xxix. (London: C. Griffin and Co., Ltd.) 36s. net.

From Constantinople to the Home of Omar Khayyam. Travels in Transcaucasia and Northern Persia for Historic and Literary Research. By Prof. A. V. W. Jackson. Pp. xxxiii+317. (London: Macmillan and Co., Ltd.) 15s. net.

Die Reizbewegungen der Pflanzen. By Dr. E. G. Pringsheim. Pp. viii+326. (Berlin: J. Springer.) 12 marks.

A Text-book of Botany for Colleges and Universities. By Members of the Botanical Staff of the University of Chicago, Drs. J. M. Coulter, C. R. Barnes, and H. C. Cowles. Vol. ii. Ecology. Pp. x+485-964+pp. a-q. (New York, &c.: American Book Co.)

## DIARY OF SOCIETIES.

### THURSDAY, JANUARY 11.

ROYAL SOCIETY, at 4.30.—On the Propagation of Waves through a Stratified Medium, with Special Reference to the Question of Reflection: Lord Rayleigh, O.M., F.R.S.—On the Variation of the Specific Heat of Water, with Experiments by a New Method: Prof. H. L. Callendar, F.R.S.—The Mechanism of the Semipermeable Membrane and a New Method of Determining Osmotic Pressure: Prof. F. T. Trouton, F.R.S.—Mobility of the Positive and Negative Ions in Gases at High Pressures: A. L. Kovarik.—A New Method of Determining the Radiation Constant: G. A. Shakespear.—The Mechanics of the Water Molecule: Dr. R. A. Houston.

MATHEMATICAL SOCIETY, at 5.30.—Successions of Integrals and Fourier Series: W. H. Young.—A New Condition for the Truth of the Converse of Abel's Theorem: G. H. Hardy and J. E. Littlewood.—On Mersenne's Numbers: A. Cunningham.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Some General Principles Involved in the Electric Driving of Rolling Mills: C. A. Ablett.

CONCRETE INSTITUTE, at 8.—Discussion on Two Reports of the Reinforced Concrete Practice Standing Committee: (a) The Standardisation of Drawings of Reinforced Concrete Work; (b) Consistency of Concrete.

### FRIDAY, JANUARY 12.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Note on Certain Co-efficients appearing in the Algebraic Development of the Perturbing Function: R. T. A. Innes.—Sur la longitude de l'Observatoire de Lille, déterminée par photographie sans fil: R. Jonckheere.—The Constitution of the Ring *Nelula* in *Lyra* (N.G.G. 6720): J. W. Nicholson.—Observations of Occultations of Stars by the Moon made in the year 1911: Royal Observatory, Greenwich.—An Example of the Use of Spherical Harmonic Analysis: F. G. Brown and H. H. Turner.—A New Form of Observatory Dome: C. P. Butler.

MALACOLOGICAL SOCIETY, at 8.—Note on the Genus *Panop*: Méziard: W. H. Dall.—Nomenclature of the Veneridæ—A Reply to Dr. W. H. Dall: A. J. Juke-Browne, F.R.S.—The Occurrence of *Helicella verpensis* in Great Britain; Notes on Some British Non-marine Mollusca: A. W. Steffox.—Characters of Two Undescribed Land Shells from Colombia; Explanation of the Figures Occurring in Westerlund's "Sibirien's Land och Sötvatten Mollusker," 1876; On Two Pre-occupied Specific Names in Gasteropoda: G. K. Gude.

### MONDAY, JANUARY 15.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.

### TUESDAY, JANUARY 16.

ROYAL INSTITUTION, at 3.—The Study of Genetics: Prof. W. Bateson, F.R.S.

ROYAL STATISTICAL SOCIETY, at 5.—The Recruiting of the Employing Classes from the Ranks of the Operatives in the Cotton Industry: Prof. S. J. Chapman and F. J. Marquis.

ILLUMINATING ENGINEERING SOCIETY, at 8.—Colour Discrimination by Artificial Light: T. E. Ritchie.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Further Discussion: Reinforced Concrete Wharves and Warehouses at Lower Pootung, Shanghai: S. H. Ellis.—The Direct Experimental Determination of the Stresses in the Steel and in the Concrete of Reinforced-Concrete Columns: W. C. Poplewell.—Composite Columns of Concrete and Steel: W. H. Burr.

### WEDNESDAY, JANUARY 17.

ROYAL METEOROLOGICAL SOCIETY, at 7.45.—Annual General Meeting.—Presidential Address, Some Meteorological Observations: Dr. H. N. Dickson.

ENTOMOLOGICAL SOCIETY, at 8.—Annual General Meeting.

ROYAL MICROSCOPICAL SOCIETY, at 8.—President's Annual Address: On Certain Blood Parasites.

INSTITUTE OF METALS, at 10.30.—A Metallographic Hygroscope: Prof. Carl A. F. Benedicks.—A Study of the Properties of Alloys at High Temperatures: Dr. G. D. Bengough.—Further Experiments on the Inversion at 470°C. in Copper-Zinc Alloys: Prof. H. C. H. Carpenter.—The Influence of Oxygen on Copper containing Arsenic or Antimony: R. H. Greaves.—The Influence of Tin and Lead on the Micro-structure of Brass: F. Johnson.—A Contribution to the History of Corrosion; The Corrosion of Condenser Tubes by Contact with Electro-Negative Substances: Arnold Philip.—The Nomenclature of Alloys: Dr. W. Rosenhain. The Behaviour of Certain Alloys when Heated in Vacuo: Prof. T. Turner.

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### THURSDAY, JANUARY 18.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: The Physiological Effects of Low Atmospheric Pressures, as observed on Pike's Peak, Colorado (Preliminary Communication): Dr. J. S. Haldane, F.R.S., C. G. Douglas, Prof. Y. Henderson, and Prof. E. C. Schneider.—A paper on the effect of altitude on the dissociation curve of the blood: J. Barcroft, F.R.S.—Note on *Astrosciera willejana* Lister: R. Kirkpatrick.—*Herpetomonas pediculi*, nov. spec., parasitic in the Alimentary Tract of *Pediculus vestimenti*, the Human Body Louse: Dr. H. B. Fantham.—Antelope Infected with *Trypanosoma gambiense*: Capt. A. D. Fraser and Dr. H. L. Duke.

ROYAL INSTITUTION, at 3.—The New Astronomy: Prof. A. W. Bickerton. LINNEAN SOCIETY, at 8.—Some Features of the Marine Flora of St. Andrews: Dr. A. Anstruther Lawson.

ROYAL SOCIETY OF ARTS, at 4.30.—The Old District Records of Bengal: Rev. W. K. Firminger.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—*Adjourned Discussion*: Residence Tariffs: A. H. Seabrook.

INSTITUTION OF MINING AND METALLURGY, at 8.—A Submerged Flexible-joint Main: F. Reed.—Unwatering Treasavan Mine: C. Brackenbury.—Notes on the Operation of Two Winding Engines: H. M. Morgans.—Stopping at the Calamon Mine: C. P. Corbett Sullivan.

### FRIDAY, JANUARY 19.

INSTITUTION OF MECHANICAL ENGINEERS, at 8.—The Evolution and Present Development of the Turbine Pump: Dr. Edward Hopkinson and Alan E. L. Chorlton.

ROYAL INSTITUTION, at 9.—Heat Problems: Sir J. Dewar, F.R.S.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Turbo-blower and Turbo-compressor: G. Ingram.

### SATURDAY, JANUARY 20.

ROYAL INSTITUTION, at 3.—The Banyoro—A Pastoral People of Uganda; (1) The Milk Customs: Rev. J. Roscoe.

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