

THE annual meeting of the Association of Public School Science Masters will be held on Wednesday and Thursday, January 10 and 11, at the London Day Training College, Southampton Row. The president this year is Sir J. J. Thomson, and the meeting promises to be of unusual interest. The exhibition of scientific apparatus, books, and new experiments will probably be the largest the association has yet brought together, and several subjects in the programme should promote lively discussion. During Wednesday afternoon Messrs. M. D. Hill and E. J. Lewis will read short papers on "Chemistry and Physics as a necessary Introduction to Biology" and "Plant Biology" respectively. Dr. Ludlam will also discuss the educational value of "Qualitative analysis." Sir J. J. Thomson will deliver his address on Thursday at eleven, and will be followed by Mr. C. E. Ashford, on "The Place of Electrostatics in a Science Course." On Thursday afternoon there will be a discussion, commenced by Mr. G. F. Daniell, on "Practical Examinations in Science." Mr. A. Vassall will also read a short paper on "Educational Psychology." On Wednesday evening there will be a dinner at the Trocadero in conjunction with the Mathematical Association. The secretary asks us to state that the discussions and exhibition are open to anyone interested in science teaching.

THE following courses of advanced lectures, which are free to students, in scientific subjects have been announced for delivery in connection with the University of London during the first term of 1912. Eight lectures on "The Self-government of the Pueblo Indians under Spanish and American Administration" will be given by Miss Barbara Freire-Marreco at the London School of Economics and Political Science on Thursdays at 3 p.m., beginning on January 25. Five lectures and one demonstration on "Genetics" will be given by Prof. F. Keeble at the Imperial College (Royal College of Science) on Thursdays at 5 p.m., beginning on January 18. Dr. W. N. Shaw, F.R.S., will lecture on "The Meteorology of the Globe" at the Meteorological Office, South Kensington, on Fridays at 5 p.m., beginning on January 19. Four lectures on "Recent Work in Physiology relating to the Circulation and to the Nervous System, with Special Reference to the Human Subject," will be given by Dr. A. D. Waller, F.R.S., in the Physiological Laboratory, South Kensington, beginning on Tuesday, January 23, at 5 p.m. Fourteen lectures on "The Hæmoflagellates" will be given at the Lister Institute of Preventive Medicine, Chelsea, by Prof. E. A. Minchin, F.R.S., on Tuesdays and Fridays at 5 p.m., commencing on Tuesday, January 16. Four Chadwick lectures on "Water and Water Supply" will be given by Sir Alexander R. Binnie at the Institution of Civil Engineers on Thursdays, beginning on February 1, at 5.30 p.m. Five lectures entitled "A Study of Jöhne's Bacillus of Cattle and the Lepra Bacilli of Man and Rats" will be given, under the will of the late Mr. Thomas Brown, by Mr. F. W. Twort, superintendent of the Brown Animal Sanatory Institution, in the Theatre of the Royal College of Surgeons, Lincoln's Inn Fields, W.C., on Monday, January 8, and the four following days, at 4 p.m.

SOCIETIES AND ACADEMIES.

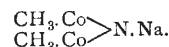
DUBLIN.

Royal Dublin Society, December 19, 1911.—Mr. R. Lloyd Praeger in the chair.—Prof. James Wilson: The inheritance of the dun coat-colour in horses. In a previous paper—the inheritance of coat-colour in horses—published in 1910 (Sc. Proc. Roy. Dublin Soc.), it was shown that the ordinary colours fit into each other like a nest of Chinese boxes, chestnut being innermost, and then, coming in succession, black, bay, brown, dun, and grey and roan. The data concerning dun were few, and its position was merely suggested in a footnote. More data—500 to 600 cases—have since been collated, and these confirm the former placing. From this it follows that dun cannot be a "reversion," since it can result only from dun matings and occasionally from grey and roan. The author discussed the history of the idea that dun is a reversion. It probably originated in Lord Morton's quagga-crossing

"experiments," and in Dr. Macdonald's criticism of these (both published by the Royal Society). Hamilton Smith's theory that horses are descended from five original stripes did not require a reversion theory; but Darwin's theory, expressed tentatively, that horses are descended from a single dun-coloured and striped species, required one, and to him mainly are we indebted for the opinion that dun is a reversion. Darwin relied upon Lord Morton's description of the foals his chestnut mare bore after her quagga hybrid, and on three other cases. Lord Morton said that one of the chestnut mare's foals had a faint dun tint in two places, and Darwin called two of them "partially dun"—later writers have called them dun altogether. These foals, however, were ordinary bays, and the other three cases were undoubted misdescriptions. Data are collected in the present paper from various stud-books, and these are confirmed by the progeny of two homozygous dun sires which were stationed recently on Clare Island, on the coast of Mayo.—E. A. Newell Arber: Contributions to our knowledge of the floras of the Irish Carboniferous rocks. Part i.—The Lower Carboniferous (Carboniferous Limestone) flora of the Ballycastle Coalfield, Antrim. Of the seven species recorded from this coalfield, *Adiantites antiquus* (Ett.), *Sphenopteris flabellata*, Baily, *Lepidodendron Veltheimi*, Sternb., and *L. Volkmannianum*, Sternb., are the more important. The evidence of the flora points to the conclusion that the coalfield is of Lower Carboniferous age, and that the rocks belong to the higher, or Carboniferous Limestone, horizon of the Lower Carboniferous.

CALCUTTA.

Asiatic Society of Bengal, December 6, 1911.—G. R. Kaya: A brief bibliography of Hindu mathematics. This is a list of works dealing with the history of Hindu mathematics. It is professedly incomplete, and it is difficult to decide what ought and what ought not to be included. This list requires amplification, particularly in the matter of Sanskrit texts and manuscripts. The original Hindu works do not go beyond the time of Bhāskarā (twelfth century A.D.), as, after this period, Hindu mathematical works cease to have any historical interest.—Rev. H. Hosten: Father A. Monserrate's "Mongolicæ Legationis Commentarius." This precious manuscript, after passing successively through Fort William College, the Calcutta Public Library, and the Imperial Library, was transferred in 1903 to St. Paul's Cathedral Library, where the Rev. W. K. Firminger discovered it. It must have belonged formerly to one of the Jesuit houses of Goa. How it came to Calcutta it is impossible to say. The earliest account of northern India by a European since the days of Vasco de Gama, the manuscript contains a detailed history of the first Jesuit mission to Akbar, and more than 100 pages are consecrated to Akbar's campaign against Kābul in 1581-2. There is in it an excellent map, drawn to scale, showing all the places passed through by Monserrate between Goa, Sūrāt, Agrā, Lahor, and Kābul (1580-2). It appears from the preface that Monserrate was the author of four distinct works:—(1) "Mongolicæ Legationis Commentarius"; (2) a work on the geography and natural history of India; (3) a history of his journey to Ethiopia; (4) a work on the geography and natural history of Arabia.—Prafulla Chandra Ray and Rasik Lal Datta: Contributions from the Chemical Laboratory, Presidency College. Allylammonium nitrite. A short paper dealing with the preparation and properties of allylammonium nitrite. The substance was made by double decomposition of allylamine hydrochloride and silver nitrite. Allylamine nitrite is a thick brownish liquid with the characteristic smell of all alkylamine nitrites.—Jitendra Nath Rakehit: Contributions from the Chemical Laboratory, Presidency College. Preliminary note on sodiumdiacetamide. This note deals very shortly with the method of preparing



Acetamide (purified by recrystallisation from benzene), anhydrous thiophene, free benzene, and freshly cut metallic sodium were boiled together under a reflex condenser for twenty or thirty minutes, when a copious crop of white crystals separated.—B. L. Chaudhuri: Fresh-water

sting-rays of the Ganges. Two species of Trygonidæ live and breed in the River Ganges above tidal influence, namely, *Hypologhus sephen* (Forscål) and *Trygon fluviatiles* (Ham. Buch). Their Indian name is discussed, and particulars as regards their capture are given.

BOOKS RECEIVED.

Die Biologie des Donaudeltas und des Inundationsgebietes der unteren Donau. By Dr. Gr. Antipa. Pp. iv + 48. (Jena: G. Fischer.) 1.50 marks.

Handbuch der Photographie und Telautographie. By Profs. A. Korn and B. Glatzel. Pp. xvi + 488. (Leipzig: O. Nemann.) 28 marks.

Neue Grundlagen der Meteorologie. By P. Hoitsy. Pp. 107. (Budapest: Franklin-Verein.) 2 marks.

Unsere Kenntnisse von den Seriengesetzen der Linien-spektra. By Dr. B. Dunz. Pp. iii + 186. (Leipzig: S. Hirzel.) 2 marks.

Zur Phylogenie der Primulaceenblüte. By Dr. S. Thenen. Pp. iv + 131. (Jena: G. Fischer.) 8 marks.

Physiologie des Menschen. By Prof. L. Luciani. Translated by Profs. S. Baglioni and H. Winterstein. Fünfte Lieferung (Schluss) Lieferung. Pp. 641-782 + viii. (Jena: G. Fischer.) 4 marks.

Monumentales und Dekoratives Pastell. By Prof. W. Ostwald. Pp. vi + 105. (Leipzig: Akademische Verlagsgesellschaft M.B.H.) 2.40 marks.

Denkschrift über die Gründung eines Internationalen Instituts für Chemie. By Prof. W. Ostwald. Pp. 30. (Leipzig: Akademische Verlagsgesellschaft M.B.H.) 1.50 marks.

Das Pflanzenreich. Edited by Prof. A. Engler. 51. Heft: Sphagnales—Sphagnaceæ (Sphagnologia universalis). By C. Warnstorf. Pp. iv + 546. (Leipzig: W. Engelmann.) 27.50 marks.

DIARY OF SOCIETIES.

FRIDAY, JANUARY 5.

GEOLOGISTS' ASSOCIATION, at 8.—On the High Terrace Gravel and on a Palæolithic Implement Factory, Dartford Heath: R. H. Chandler and A. L. Leach.—On the London Clay and Bagshot Beds (Passage Beds), and on the Gravel of Shooter's Hill, Kent: A. L. Leach.

MONDAY, JANUARY 8.

SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Production of Formic and Acetic Acids by the Atmospheric Oxidation of Turpentine: C. T. Kingzett and R. C. Woodcock.—A Rapid Volumetric Method for the Determination of Free Sulphur: C. Davis and J. L. Foucar.—The Relative Absorption of Dyes by Sand and Natural Fibres: W. P. Dreaper and W. A. Davis.—Ingrain Dyeing—Influence of Certain Groups on the Re-solution Factor: W. P. Dreaper.

VICTORIA INSTITUTE, at 4.30.—The Greek Papyri: Prof. G. Milligan.

TUESDAY, JANUARY 9.

INSTITUTION OF CIVIL ENGINEERS, at 8.—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. Poppellwell.—Composite Columns of Concrete and Steel: W. H. Burr.

SOCIETY OF DYERS AND COLOURISTS, at 8.—Some Problems in Garment Dyeing: F. G. Newbury.—Aluminium in the Service of Chemical Industry: Dr. Richard Seligman.

WEDNESDAY, JANUARY 10.

GEOLOGICAL SOCIETY, at 8.—On a Late Glacial Stage in the Valley of the River Lea subsequent to the epoch of River-drift Man: S. Hazzledine Warren.

THURSDAY, JANUARY 11.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: 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.

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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.

FRIDAY, JANUARY 12.

ROYAL ASTRONOMICAL SOCIETY, at 5.

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

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