

and thorium the absorption, although complete, is slower.—Relation between the chemical constitution of the colouring materials derived from triphenylmethane and their absorption spectra in aqueous solution, by M. P. Lemoult. All the dyes examined gave in aqueous solution an absorption spectrum possessing a red luminous band, the centre of which was fixed in position ( $\lambda=6860$ ).—On blue chlorophylline, by M. M. Tsvett. By a particular mode of treatment, which is described in detail, the author has succeeded in obtaining crystals of a chlorophylline of a pure blue colour, apparently different from the phyllocyanine of Frémy and the chlorophyllines of Sorby and Gautier.—Cryoscopy of human sweat, by M. P. Ardin-Delleil. Normal sweat from a healthy man has an average freezing point of  $-0^{\circ}24$  C. It may vary in individual cases between  $-0^{\circ}08$  and  $0^{\circ}46$  C., the oscillations being in great part due to the variations in the quantity of common salt contained in the perspiration.—On the development of *Sclerostomum equinum*, by M. A. Conté.—On the exosmosis of diastases by plantules, by M. Jules Laurent. Seeds during germination may give out a portion of the diastases necessary to the digestion of their food reserves, and thus utilise certain insoluble organic materials, such as starch, but the phenomenon stops when germination ceases.—Origin of an ochreous clay, characteristic of the red diluvium, by M. Stanislas Meunier.—The uses of transparencies for combining the effects of the synodic revolution with those of terrestrial rotation, by M. A. Poincaré.—Observations on the Leonids at Algiers, by M. H. Tarry.

CAPE TOWN.

South African Philosophical Society, October 3.—T. Stewart, Vice-President, in the chair.—The Secretary communicated a paper by Dr. R. Broom, on *Ictidosuchus primaevus*, nov. spec. The paper contained a description of the remains of a small Theriodont reptile from the Karroo Beds of Pearston. The form is specially interesting as illustrating a new Theriodont type, and one which has many affinities with the Dicynodonts.—Prof. J. T. Morrison read a paper on some periodical changes in the rainfall at the Royal Observatory, Cape of Good Hope, since 1841. Prof. Morrison dealt with the records of rainfall that have been kept at the Royal Observatory since the year 1841. These showed certain regularities attended by many apparent irregularities. The author subjected the records to the process of mathematical analysis discovered by Fourier, and so showed evidences of two sets of fluctuations running simultaneously through the monthly amounts of rainfall. These fluctuations completed themselves in approximately nine and ten years respectively. The question of the reality of these fluctuations was considered, and tested by comparing their effects in producing apparent fluctuations of slightly different times, such as the well-known sun-spot period of about eleven years. The agreement was such as to make it probable that the two first-mentioned fluctuations are the two prevailing periodicities. The approximate values of some of their periods had been computed, and the totals gave a fair approximation to all the more striking changes that have occurred in the rainfall at the Observatory from year to year for the last sixty years. The author concluded that the coincidences were sufficient to warrant a careful investigation of the exact times of the chief fluctuations, and a computation of the magnitude of their sub-periods. He intends to prosecute the research.

DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 29.  
GOLDSMITHS' INSTITUTE CHEMICAL SOCIETY, at 8.30.—The Profession of an Industrial Chemist: Dr. J. Lewkowitsch.  
MONDAY, DECEMBER 3.  
VICTORIA INSTITUTE, at 4.30.—The Proceedings of the Congress for the History of Religion, Paris: Theophilus G. Pinches.  
TUESDAY, DECEMBER 4.  
SOCIETY OF ARTS, at 8.—Electric Oscillations and Electric Waves: Prof. J. A. Fleming, F.R.S.  
INSTITUTION OF CIVIL ENGINEERS, at 8.—Paper to be discussed: Machinery for the Manufacture of Smokeless Powder: Oscar Guttmann.—Papers to be read, time permitting: The Signalling on the Waterloo and City Railway; and Note on the Signalling of Outlying Siding Connections: A. W. Szlumper.—Signalling on the Liverpool Overhead Railway: S. B. Cottrell.  
ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Lantern Slides, Pastoral and Sundry: Colonel J. Gale.  
ZOOLOGICAL SOCIETY, at 8.30.—On the Breeding Habits of *Protoplerus symnarchus*, and some other West African Fishes: J. S. Budgett.—On the Mammals collected during the "Skeat Expedition" to the Malay

Peninsula 1899-1900: J. Lewis Bonhote.—On the Habits and Natural Surroundings of Insects and other Animals observed during the "Skeat Expedition" to the Malay Peninsula, 1899-1900: Nelson Annandale.

WEDNESDAY, DECEMBER 5.

SOCIETY OF ARTS, at 8.—Road Traction: Prof. H. S. Hele-Shaw, F.R.S.  
GEOLOGICAL SOCIETY, at 8.—Bajocian and Contiguous Deposits in the Northern Cotteswolds: the Main Hill-Mass: S. S. Buckman.—On the Corallian Rocks of St. Ives (Hunts.) and Elsworth: C. B. Wedd.—The Unconformity of the Upper Coal Measures to the Middle Coal Measures of the Shropshire Coalfield, and its Bearing upon the Extension of the Latter under the Trassic Rocks: W. J. Clarke.  
SOCIETY OF PUBLIC ANALYSTS, at 8.—The Examination of Extracts of Malt: Dr. W. J. Sykes and C. A. Mitchell.—(1) Note on the Estimation of Glycerine; (2) The Examination of Gum Resins: Dr. J. Lewkowitsch.—Note on the Occurrence of Barium in the Spring Water of Boston Spa: Percy A. E. Richards.—On the Analysis of Samarskite: Arthur G. Levy.  
ENTOMOLOGICAL SOCIETY, at 8

THURSDAY, DECEMBER 6.

ROYAL SOCIETY, at 4.30.—Probable papers: The Histology of the Cell Wall, with Special Reference to the Mode of Connection of Cells. Part I. The Distribution and Character of "Connecting Threads" in the Tissues of *Pinus sylvestris* and other Allied Species: W. Gardiner, F.R.S., and A. W. Hill.—On the "Blaze Currents" of the Frog's Eyeball; Dr. A. D. Waller, F.R.S.—On a Bacterial Disease of the Turnip (*Brassica napus*): Prof. M. G. Potter.—The Micro-organism of Distemper in the Dog, and the Production of a Distemper Vaccine: Dr. S. M. Copeman.—On the Tempering of Iron Hardened by Overstrain: J. Muir.  
CHEMICAL SOCIETY, at 8.—Ballot for the Election of Fellows.—Santalonic Acid: A. C. Chapman.—Ammonium Bromide and the Atomic Weight of Nitrogen: A. Scott, F.R.S.—Interaction between Urethanes and Primary Benzenoid Amines: Dr. A. E. Dixon.—The Decomposition of Chlorates. Part III. Calcium Chlorate and Silver Chlorate: W. H. Sodeau.—Nitride of Iron: Gilbert J. Fowler.—The Heat of Formation and Constitution of Iron Nitride: Gilbert J. Fowler and Philip J. Hartog.—Relationships of Oxalacetic Acid: H. J. H. Fenton, F.R.S., and H. O. Jones.  
RÖNTGEN SOCIETY, at 8.—Exhibition and Description of a Stereoscopic Fluoroscope and a New Rotary Mercury Break: J. Mackenzie Davidson.  
LINNEAN SOCIETY, at 8.—On some New Foraminifera from Funafuti: C. Chapman.—On British Thrifts: G. Claridge Druce.

FRIDAY, DECEMBER 7.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Dock Gates: F. K. Peach.  
GEOLOGISTS' ASSOCIATION, at 8.—The Zones of the White Chalk of the English Coast. II. Dorsetshire: Dr. A. W. Rowe.

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