

conclusion is drawn from this that where irrigation is possible in the spring without too great an expense, the results will be very advantageous to the farmer.—Some cases of integration of the equation to the brachistochrome, by M. Haton de la Goupillière.—On cavitation in screw steamers, by M. J. A. Bormand. The name cavitation is given to the phenomenon met with when a screw is driven in water at speeds above a certain limiting value. A cavity is formed in the water inside which the screw revolves, and a further increase in the power driving the screw then results in no increase in the velocity of the boat. The alterations necessitated in the usual formulæ for screw propulsion by this phenomenon are discussed in detail.—On the velocity of propagation of the X-rays, by M. T. Blondlot. By means of the action of the X-rays upon the discharge of a Hertzian exciter, it is shown that the duration of these rays is less than  $5 \times 10^{-10}$  sec., and that the velocity of the X-rays is of the same order as that of the Hertzian waves.—Remarks by M. le General Bassot on the volume of the *Connaissance des Temps* for 1905.—New observations on the volcanic eruptions at Martinique, by M. A. Lacroix.—Observations on the sun made at the Observatory of Lyons with the Brunner equatorial during the second quarter of 1902, by M. J. Guillaume. The results are summarised in three tables giving the number of spots, their distribution in latitude and the distribution of the faculæ in latitude.—On the theory of algebraic functions, by M. Ludwig Schlesinger.—On Bessel's equation with a second member, by M. A. S. Chessin.—On an example of correlative transformation in mechanics, by M. Paul J. Suchar.—The precautions to be taken in the employment of silk fibres as torsion wires, by M. V. Crémieu.—Vision at a distance by electricity, by M. J. H. Coblyn.—The variation of the magnetic resistance of a bar submitted to traction, by M. Fraichet.—The electromotive force of a thermoelectric element, by M. Ponsot.—A method for the volumetric estimation of tannin and the analysis of wood and of tannin extracts, by M. Albert Thompson. The method is based upon the determination of the amount of oxygen absorbed from an alkaline solution of hydrogen peroxide by the tannin.—On a new base derived from galactose, by M. E. Roux. By the reduction of the oxime obtained from galactose, a new base named galactamine is obtained, the preparation and chief properties of which are described.—On a new compound of the hexamethylene-tetramine group, by M. Marcel Descudé.—On a solid acid from the oil of *Elaeococca vernicia*, by M. L. Maquenne.—On musculamine, a base derived from muscles, by MM. A. Etard and A. Vila. The base described is the first example of a triamine base among biological products.—On the origin of the natural coloration of silk in the Lepidoptera, by MM. D. Leprat and A. Conte. These researches show the possibility of passing a substance such as a colouring matter through the digestive tube on to the silk, through the blood.—On the new genus *Gyrinocheilus* of the family Cyprinidae, by M. Léon Vaillant.—Contribution to the study of the Anopheles of the Isthmus of Suez, by M. Cambouliu.—The physical conditions of tuberisation in plants, by M. Noel Bernard.—Observations on the germination of the spores of *Saccharomyces Ludwigi*, by M. A. Guillemond.—On the pollen of plants belonging to the genus *Asclepias*, by M. Paul Dop.—New experiments in maritime aeronautics, by M. H. Hervé.

## DIARY OF SOCIETIES.

THURSDAY, NOVEMBER 6.

LINNEAN SOCIETY, at 8.—Notes on a Natural History Journey to Chile: H. J. Elwes, F.R.S.  
RÖNTGEN SOCIETY, at 8.30.—Address by the President, Mr. Herbert Jackson.  
CHEMICAL SOCIETY, at 8.—Di-Indigotine: J. Moir.—Note on the Localisation of Phosphates in the Sugar Cane: C. H. G. Sprankling.—The Specific Heats of Gases: H. Crompton.—On the Non-existence of the Gaseous Sulphide of Carbon described by Deninger: E. J. Russell and N. Smith.—The Action of Nitric Acid on Bromophenolic Compounds: W. Robertson.—Hydroxyoxamides, Part II.: R. H. Pickard, C. Allen, W. A. Bowdler and W. Carter.—3:5-Dichloro-xylene and 3:5-Dichloro-phthalic Acid: A. W. Crossley and H. R. Le Sueur.—Isometric Anhydrous Sulphates of the Form  $M^2SO_4 \cdot R_2SO_4$ : F. R. Mallet.—The Catalytic Racemisation of Amygdaline: J. W. Walker.—The Combination of Carbon Monoxide with Chlorine under the Influence of Light: G. Dyson and A. Harden.—The Constituents of Commercial Chrysoarobin: H. A. D. Jbrett and C. E. Potter.

SATURDAY, NOVEMBER 8.

ESSEX FIELD CLUB (Essex Museum of Natural History, Stratford), at 6.30 p.m.—Results of the Fungus Foray on October 17 and 18: Dr.

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M. C. Cooke.—Report of Delegate at British Association Meeting, Belfast: W. Whitaker, F.R.S.—Lecture, "Insect Life": F. Enock.

TUESDAY, NOVEMBER 11.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Electric Tramways: C. Hopkinson, B. Hopkinson and E. Talbot.  
ANTHROPOLOGICAL INSTITUTE, at 8.15.—On the Classification and Arrangement of the Exhibits of an Anthropological Museum: W. H. Holmes.—On the Initiation Ceremonies of the Natives of the Papuan Gulf: Rev. J. H. Holmes.  
ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—World-shaking Earthquakes: Prof. J. Milne, F.R.S.

THURSDAY, NOVEMBER 13.

MATHEMATICAL SOCIETY, at 5.30.—Address on the Infinite and the Infinitesimal in Mathematical Analysis: Dr. E. W. Hobson.—Ueber den Satz der Gleichheit der Basiswinkel im gleichschenkligen Dreieck: Dr. D. Hilbert.—The Summation of a Certain Series: Prof. A. C. Dixon.—Expansion by Means of Lamé's Functions: Prof. A. C. Dixon.—Sets of Intervals: W. H. Young.—Note on Unclosed Sets of Points defined as the Limits of a Sequence of Closed Sets of Points: W. H. Young.—Wave Propagation in Two Dimensions: Prof. H. Lamb.—The Continuation of Certain Fundamental Powers Series: Prof. M. J. M. Hill.—A Geodesic on a Spheroid and an Associated Ellipse: L. Crawford.  
INSTITUTION OF ELECTRICAL ENGINEERS, at 8.

FRIDAY, NOVEMBER 14.

ROYAL ASTRONOMICAL SOCIETY, at 5.

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