

combines with a part of the body undergoing hydrolysis, another part combining with a portion of the products of hydrolysis. It may be supposed either that it is the non-combined part of the ferment which acts upon the bodies to be split up, or, on the other hand, that the unstable compound formed is itself decomposed, regenerating a part of the ferment. It is remarkable that both these hypotheses lead to the same law. Experiments are given showing the action of invertin upon saccharose alone and mixed with invert sugar, and of emulsin upon salicin.

NEW SOUTH WALES.

Royal Society, October 8.—Prof. Warren, president, in the chair.—Occurrence of the mineral gadolinite at Cooglegong, Pilbarra District, West Australia, by Mr. Bernard F. Davis.—Pot experiments to determine the limits of endurance of different farm crops for certain injurious substances, part i. (wheat), by Mr. F. B. Guthrie and Mr. R. Helms. The authors describe experiments to test the effect upon the growth of the wheat-plant of certain substances occasionally found in the soil and in manures, and known when present in excessive quantities to act as plant poisons. The following table summarises the principal results obtained.

Effect upon germination and subsequent growth of wheat of different percentages of injurious substance in the soil.

	Germination affected.	Germination prevented.	Growth affected.	Growth prevented.
NaCl	0.05	0.20	0.05 to 0.15 (recovered)	0.20
N ₂ CO ₃	0.30	0.5 to 1.0	0.10	0.40
NH ₄ CNS	0.005	0.01	0.001	0.005
NaClO ₃ above	0.01	0.05	0.001	0.003
As ₂ O ₃	0.05	0.50	0.05	0.10

DIARY OF SOCIETIES.

THURSDAY, DECEMBER 4.

ROYAL SOCIETY, at 4.30.—(1) On the "Blaze-Currents" of the Incubated Hen's Egg; (2) On the "Blaze-Currents" of the Crystalline Lens: Dr. A. D. Waller, F.R.S.—A Contribution to the Question of "Blaze-Currents": Dr. A. Durig.—On the Similarity of the Short Period Pressure Variation over Large Areas: Sir Norman Lockyer, F.R.S., and Dr. W. J. S. Lockyer.—Isomeric Change in Benzene Derivatives. The Interchange of Halogen and Hydroxyl in Benzenediazonium Hydroxides: Dr. K. J. P. Orton.—On the Vibrations and Stability of a Gravitating Planet: J. H. Jeans.

LINNEAN SOCIETY, at 8.—New and rare Corals from Funafuti: G. C. Bourne.—On the Morphology of the Flowers and Fruits of the Xylostem Section of Lonicera: F. A. Newell Arber.—Note on *Carex Tolomiei*, Boott: B. Clarke, F.R.S.—New and old Phalangidæ from the Indian Peninsula: C. With.

RÖNTGEN SOCIETY, at 8.30.—An Observation bearing upon the Therapeutic Action of the Focus Tube: Dr. D. Walsh.—X-Rays in Ophthalmic Work: Stephen Mayou.—Mr. Isenthal will show the Nodon Electric Valve for converting Alternating into Continuous Current.

CHEMICAL SOCIETY, at 8.—The Absorption Spectra of Metallic Nitrates. Part II.: W. N. Hartley.—The Specific Heats of Liquids: H. Crompton.—(1) Studies in the Camphane Series. Part X. The Constitution of Enolic Benzoylcamphor; (2) Note on the Isomeric Benzoyl Derivatives from Isonitrosocamphor: M. O. Forster.—The Constitution of the Products of Nitration of Meta-acetoluidide: J. B. Cohen and H. D. Dakin.

AERONAUTICAL SOCIETY, at 8.—Presidential Address. Recent Aeronautical Progress: Major B. F. S. Baden-Powell.—The Contributions of Balloon Investigations to Meteorology: Dr. W. N. Shaw, F.R.S.—The Kite Equipment of the Scottish National Antarctic Expedition: John Anderson.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Extra Meeting for the Inaugural Address by the President, Mr. J. Swinburne.

FRIDAY, DECEMBER 5.

INSTITUTION OF CIVIL ENGINEERS, at 8.—The Erection of Steel Bridges, Sheffield Extension of the London and North-Western Railway: A. Reynolds.

GEOLOGISTS' ASSOCIATION, at 8.—On the Formation of Chert: Miss Catherine A. Raisin. Illustrated by Lantern Slides.—A List of the Fish Remains from the Middle Bagshot Beds of the London Basin: A. K. Coomaraswamy.

SATURDAY, DECEMBER 6.

ESSEX FIELD CLUB (Essex Museum of Natural History, Stratford), at 6.30.—The Non-Marine Mollusca of the River Lea Alluvium at Wathamstow: A. S. Kennard and B. B. Woodward.—Demonstration of the Lumière Process of Colour Photography and its applications to Natural History Work: Edward R. Turner.

MONDAY, DECEMBER 8.

SOCIETY OF ARTS, at 8.—The Future of Coal Gas and Allied Illuminants: Prof. V. B. Lewes.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Three Years' Exploring Work in Central Asia: Dr. Sven Hedin.

TUESDAY, DECEMBER 9.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Discussion of paper on High-Speed Electrical Generating Plant: T. H. Minshall.

WEDNESDAY, DECEMBER 10.

SOCIETY OF ARTS, at 8.—French Rural Education and its Lessons for England: Cloudesley Brereton.

THURSDAY, DECEMBER 11.

ROYAL SOCIETY, at 4.30.—Probable papers:—On Certain Properties of the Alloys of the Gold-Silver Series: The late Sir William Roberts-Austen, F.R.S., and Dr. T. K. Rose.—Abnormal Changes in some Lines in the Spectrum of Lithium: H. Ramage.—An Error in the Estimation of the Specific Gravity of the Blood by Hammerschlag's Method, when Employed in Connection with Hydrometers: Dr. A. G. Levy.—Quaternions and Projective Geometry: Prof. C. J. Joly.

INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—The Photometry of Electric Lamps: Dr. J. A. Fleming, F.R.S.

SOCIETY OF ARTS, at 4.30.—Domestic Life in Persia: Miss Ella C. Sykes.

INSTITUTE OF ACTUARIES, at 5.30.—Lecture on Statistics (Measurement of Groups): A. L. Bowley.

MATHEMATICAL SOCIETY, at 5.30.—Application of Matrix Notation to the Solution of Linear Differential Equations: Dr. H. F. Baker.—The Expression of the Double Zeta and Gamma Functions in Terms of Elliptic Functions: G. H. Hardy.—Sets of Intervals. Part II, Overlapping Intervals: W. H. Young.—Series connected with the Enumeration of Partitions: Rev. F. H. Jackson.—The Abstract Group simply Isomorphic with the Group of Linear Fractional Transformations in a Galois Field.

FRIDAY, DECEMBER 12.

ROYAL ASTRONOMICAL SOCIETY, at 5.

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