

fatty amines upon the dibenzoate of ethylene, by M. Marcel Descudé.—The action of halogen esters upon ammonium thio-sulphocarbamate, by M. Marcel Delépine.—On the ichthyological fauna of the fresh waters of Borneo, by M. Léon Vaillant.—On the fishes of the Chondrostome group in the fresh waters of France, by M. Louis Roule.—The morphological and anatomical variations presented by the gizzard in some Coleoptera, by M. L. Bordas.—On the polychaetal annelids in fresh water, by M. Ch. Gravier. Excretion in the Cirripedes, by M. L. Bruntz.—The application of a character of ethological order to the natural classification, by M. L. Matruchot.—The distribution of sphaerulins in vegetable families, by M. Lovis Petit.—The present state of the volcano of Martinique, by M. Lacroix.—On the evolution of the spermatid in the *Notonecta glauca*, by MM. J. Pantel and R. de Sincé.—On the presence of paranucleolar acid corpuscles in the cells of *Locus niger* and *Locus coeruleus*, by M. G. Marinresco.—The ratio of the weight of the liver to the total weight of the animal, by M. E. Maurel. Adult animals have less liver per kilogram weight than young animals of the same species. In the same species of animal, when differences of volume correspond to different varieties, as in the dog, the quantity of liver per kilogram of animal is higher as the animal is smaller. This proportion also varies with the nature of the food.—On the variations of phosphorus in animal tissue, by M. A. L. Percival.—Physiological researches on the effects of cervical sympathectomy, by MM. Moussu and Charrin.—Muscular hæmoglobinuria, by MM. Jean Camus and P. Pagniez.—On the formation of the *anticorps* in the serum of vaccinated animals, by MM. A. Calmette and E. Breton.

DIARY OF SOCIETIES.

THURSDAY, DECEMBER 11.

ROYAL SOCIETY, at 4.30.—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.—The Spectrum of γ Cygni: Sir Norman Lockyer, F.R.S., and F. E. Baxandall.—Abnormal Changes in some Lines in the Spectrum of Lithium: H. Ramage.—Quaternions and Projective Geometry: Prof. C. J. Joly.—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.
 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.—(1) The Integration of Linear Differential Equations; (2) The Determination of the Finite Equations of a Continuous Group: 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: Prof. L. E. Dickson.—The Continuation of the Series for arc sin x : Prof. M. J. M. Hill.—The Functions associated with the Parabolic Cylinder in Harmonic Analysis: E. T. Whittaker.

FRIDAY, DECEMBER 12.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Ephemeris for Physical Observations of Jupiter, 1902-1904: A. C. D. Crommelin.—Cape Double Star Results, 1902: R. T. A. Innes.—On Jacobi's Method of Facilitating the Numerical Solution of Equations arising in the Theory of Secular Perturbations: H. C. Plummer.—Note on Binding Together Réseaux and Plates: J. A. Hardcastle.—*Promised paper*:—Distribution of Stars as derived from a Discussion of the Bonn, Schönfeld and Cape Photographic Durchmusterungs: F. A. Bellamy.
 PHYSICAL SOCIETY, at 5.—A Portable Capillary Electrometer: S. W. J. Smith.—On Astigmatic Aberration: R. J. Sower.—Experiments on Shadows in an Astigmatic Beam: The President.—Vapour-Density Determinations: Sir W. Ramsay, F.R.S., and Dr. B. B. Steele.—A Lecture Experiment on Gaseous Diffusion: Prof. L. R. Willerorce.
 EPIDEMIOLOGICAL SOCIETY, at 8.30.—The Bearing of Outbreaks of Food Poisoning upon the Etiology of Summer Diarrhoea: Prof. Sheridan Delépine.

MONDAY, DECEMBER 15.

SOCIETY OF ARTS, at 8.—The Future of Coal Gas and Allied Illuminants: Prof. Vivian B. Lewes.
 ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—Explorations in North-west Mexico: Carl Lumholtz.

TUESDAY, DECEMBER 16.

ROYAL STATISTICAL SOCIETY, at 5.—English Railway Statistics: W. M. Acworth.
 INSTITUTION OF CIVIL ENGINEERS, at 8.—The Rupnarayan Bridge, Bengal-Nagpur Railway: S. Martin-Leake.

WEDNESDAY, DECEMBER 17.

CHEMICAL SOCIETY, at 5.30.—A Reagent for the Identification of Carbamide and of certain other Nitrogen Compounds: H. J. H. Fenton.—The Rate of Decomposition of Diazo-Compounds. Part II., Diazo-Compounds of the Naphthalene Series: J. C. Cain and F. Nicoll.—(1) The State of Carbon Dioxide in Aqueous Solution; (2) Qualitative Separation of Arsenic, Antimony and Tin: J. Walker.—The Hydrates and Solubility of Barium Acetate: J. Walker and W. A. Fyffe.—The γ β -Dimerethylglutaric Acids, and the Separation of Cis- and Trans-Forms of Substituted Glutaric Acid: J. F. Thorpe and W. J. Young.
 ROYAL METEOROLOGICAL SOCIETY, at 7.30.—The Climate of Cyprus: C. V. Bellamy.—The Eclipse Cyclone of 1900: H. Helm Clayton.
 GEOLOGICAL SOCIETY, at 8.—Note on the Magnetite-Mines near Cogné: Prof. T. G. Brnney, F.R.S.—The Elk (*Alces machilis*) in the Thames Valley: E. T. Newton, F.R.S.—Observations on the Iiree Marble, with Notes on Others from Iona: A. K. Coomaraswamy.
 ROYAL MICROSCOPICAL SOCIETY, at 8.—The Genus *Diaschiza*: F. R. Dixon-Nuttall and Rev. R. Freeman.—A New Arrangement for Taking Photomicrographs in Colours: E. R. Turner.
 SOCIETY OF ARTS, at 8.—The South Russian Iron Industry: Archibald P. Head.

THURSDAY, DECEMBER 18.

LINNEAN SOCIETY, at 8.—Notes on Copepoda from the Faeroe Channel: Thos. Scott.—Amphipoda of the *Southern Cross* Antarctic Expedition; Alfred O. Walker.—The Deep-Sea Isopod *Anurus tranchiatus*, Bedd.: Dr. H. J. Hansen.
 INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Notes of Recent Electrical Designs: W. B. Esson.

FRIDAY, DECEMBER 19.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Electricity Supply from Double Current-Generators: P. R. Wray.
 INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Recent Practice in the Design, Construction and Operation of Raw Cane Sugar Factories in the Hawaiian Islands: J. N. S. Williams.

CONTENTS.

PAGE

Cooperation among Instrument Makers. By R. T. G.	121
American Food and Game Fishes. By G. A. B.	122
Human Anatomy. By Dr. A. Keith	122
Differential Calculus for Beginners. By G. H. B.	123
Gall-Insects. By W. F. K.	124
Our Book Shelf:—	
Wolfrum: "Chemisches Praktikum."—H. M. D.	125
Dron: "The Coal-Fields of Scotland"	125
Hett: "A Glossary of Popular, Local, and Old-Fashioned Names of British Birds."—R. L.	125
Letters to the Editor:—	
Suggested Nature of the Phenomena of the Eruption of Mont Pelée on July 9. Observed by the Royal Society Commission.—Dr. Edward Divers, F.R.S.	126
The Paradox of the Piano Player.—Prof. G. H. Bryan, F.R.S.	127
Cost of Scientific Education in Germany and England. Walter Smith	127
The Reproduction of Colours by Photography. (With Coloured Supplement.) By H. E. Dresser and Sir H. Trueman Wood	127
Fire-Walking in Fiji. (Illustrated.) By A. C. H.	130
The Present State of Wireless Telegraphy. (Illustrated.) By Maurice Solomon	131
Notes	133
Our Astronomical Column:—	
New Comet 1902 <i>d</i> (Giacobini)	137
The Variability of α Orionis	137
Activity of the Lunar Crater Linné	137
Redeterminations of the Velocity of Light and the Solar Parallax	137
The "Annuaire Astronomique"	137
Meteorology at Great Altitudes. By A. Lawrence Rotch	137
University and Educational Intelligence	140
Societies and Academies	141
Diary of Societies	144