MM. P. Barbier and L. Bouveault .- Study in germination, by M. J. de Rey-Pailhade .- On the simultaneous determination of the mineral and organic acidity in the juice of the beetroot, by M. D. Sidersky. Advantage may be taken of the indifference of Congo-red paper to the organic acids, but a simpler method is to use a colouring matter present in the juice itself.—The origin of the three-colour theory of the optic nerve, by M. J. P. Durand. A recognition of the work of Thomas Young.—On the influence of lecithin on the growth and multiplication of organisms, by M. B. Danilewsky,—Comparative study of the buccal mass of gasteropods, by M. A. Amaudrut.—Cephalo-pods from the stomach of a cachalot, caught at the Azores, by M. L. Joubin.-Some effects of the synodic revolution of the moon on the distribution of atmospheric pressures in the autumn season, by M. A. Poincaré .- On a meteor observed in Algeria, December 14, 1895, 10h. 15m. p.m., by M. J. Triboulet.

# DIARY OF SOCIETIES.

#### LONDON.

THURSDAY, JANUARY 9.

SOCIETY OF ANTIQUARIES, at 8.30. MATHEMATICAL SOCIETY, at 8.—On a certain Ternary Cubic: Prof. Lloyd Tanner.—Further Communication on Boltzmann's Minimum Function: S. H. Burbury, F.R.S.—Examples illustrating Lord Rayleigh's Theory of the Stability or Instability of certain Fluid Motions: A. E. H. Love, FD S.

ROVAL INSTITUTION, at 3.—Sound, Hearing, and Speech : Prof. McKen-drick, F.R.S.

GICK, F.K.S. FRIDAY, JANUARY 10. MALACOLOGICAL SOCIETY, at 8.—List of South Australian Pleurotomidæ with Descriptions of New Species : G. B. Sowerby.—Descriptions of New Land Mollusca from New Zealand and Macquarie Island : Henry Suter.— The Genus Hyalimax, or a near Ally (Neohyalimax), in Brazil : Dr. H. Simroth.—On a Collection of Slugs from the Sandwich Islands : Walter N. Collinge E. Collinge.

ROYAL ASTRONOMICAL SOCIETY, at 8. CLINICAL SOCIETY, at 8.30.

#### SATURDAY, JANUARY 11.

Association for the Improvement of Geometrical Teaching (University College), at 11. — At 2. — Business Meeting. — Geometrical Methods: Dr. Larmor.

ROYAL BOTANIC SOCIETY, at 3.45.

SUNDAY, JANUARY 12.

SUNDAY LECTURE SOCIETY, at 4.-Pasteur and his Work: Prof. Percy Frankland, F.R.S.

MONDAY, JANUARY 13.

MEDICAL SOCIETY, at 8.30.

TUESDAY, JANUARY 14.

- TUESDAY, JANUARY 14. ROYAL INSTITUTION, at 3.—The External Covering of Plants and Animals : its Structure and Functions: Prof. C. Stewart. INSTITUTION OF CIVIL ENGINEERS, at 8.—The Sanitary Works of Buenos Ayres : Sewerage, Drainage, and Water-Supply: Hon. R. C. Parsons. ZOOLOGICAL SOCIETY, at 8.30.—A Preliminary Revision and Synonymic Catalogue of the Hesperiidæ of Africa and the adjacent Islands, with Descriptions of some apparently New Species : Rev. W. J. Holland.— On a Collection of Butterflies obtained by Mr. R. Crawshay in Nysaa-land between the Months of January and April, 1805; Dr. Arthur G. Butler.—On a Newly-discovered Modification of the Iris in the Eyes of certain of the Ungulata adapted for assisting Vision : Dr. G. Lindsay Johnson. Johnson.
- JOINSON. ROYAL PHOTOGRAPHIC SOCIETY, at 8.—Astigmatism and a New Stigmatic Portrait Lens: H. L. Aldis. ROYAL ASIATIC SOCIETY, at 3. ROYAL MEDICAL AND CHIRURGICAL SOCIETY, at 8.30.

WEDNESDAY, JANUARY 15

Society of Arts, at 8.—The Making of a Great University for London : Prof. Silvanus P. Thompson, F.R.S. ENTONILOGICAL SOCIETY, at 8.—Annual Meeting.—Election of Council and Officers.—The Speculative Method in Entomology : Prof. Meldola,

- and Onlers. The Speculative Method in Entomology 1101. Methoda, F.R.S., President. Royal Microscopical Society, at 8.—Annual Meeting.—Election of Council.—Address by the President, A. D, Michael. Royal METEOROLOGICAL SOCIETY, at 8.—Annual General Meeting.
- BRITISH ARCHÆOLOGICAL ASSOCIATION, at 8.

THURSDAY, JANUARY 16.

THURSDAY, JANUARY 16. ROYAL SOCIETY, at 4.30. LONDON INSTITUTION, at 6.—Experiments with Incandescent Lamps : Prof. Fleming, F.R.S. LINNEAN SOCIETY, at 8.—On the Fistulose Polymorphinæ and the Ramu-linæ : Prof. T. Rupert Jones, F.R.S., and F. Chapman. SOCIETY OF ARTS, at 4.30.—The Shan Hills : their Peoples and Products : Colonel R. G. Woodthorpe, C.B., R.E. SOCIETY OF ARTS, at 8.30. CHEMICAL SOCIETY, at 8.—The Acetylene Theory of the Luminosity of Hydrocarbon Flames : Prof. Vivian B. Lewes.—And other Papers. INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Presentation of Premiums. —Inaugural Address of the President, Dr. John Hopkinson, F.R.S. NUMISMATIC SOCIETY, at 7.

NO. 1367, VOL. 53]

#### FRIDAY, JANUARY 17.

ROVAL INSTITUTION, at 9.—Dore about Argon: Lord Rayleigh. QUEKETT MICROSCOPICAL CLUM, at 8. INSTITUTION OF CIVIL ENGINEERS, at 8.—Iron Tunnels: W. O. Leitcu. EPIDEMIOLOGICAL SOCIETY, at 8.—Experiences in Relation to Cholera in India from 1842-79: Surgeon-General C. A. Gordon, C.B.

## SATURDAY, JANUARY 18.

ROVAL INSTITUTION, at 3.-To the North of Lake Rudolf and among the Gallas : Dr. A. Donaldson Smith.

# BOOKS, PAMPHLETS, and SERIALS RECEIVED.

BOOKS, PAMPHLETS, and SERIALS RECEIVED.
BOOKS, —Annuaire pour l'an 1896, publié par Le Bureau des Longitudes (Paris, Gauthier-Villars).—Le Mouvement : E. J. Marey (Paris, Masson).—Principii della Teoria Matematica del Movimento dei Corpi : Prof. G. A. Maggi (Milano, Hoepli).—Elementary Treatise on Electricity and Magnetism : Profs. Foster and Atkinson (Longmans).—History of the Cholera. Controversy : Sir G. Johnson (Churchill).—Quain's Elements of Anatomy, roth edition, Vol. 3, Part 4, Splanchnology : Profs. Schäfer and Symington (Longmans).—Comité International des Poids et Mesures. Procès-Verbaux des Séances de r894 (Paris, Gauthier-Villars).—Travaux et Mémoires de Bureau International des Poids et Mesures, tome xi. (Paris, Gauthier-Villars).—Travaux et Mémoires de Bureau Internations of the Royal Society of Victoria. Vol. iv. A Monograph of the Tertiary Polyzoa of Victoria : Dr. P. H. MacGillivray (Melbourne).
PAMPHLETS.—Special Map of British Guiana (Philip) : Frederic Kitton (Redway).—Guide to the British Mycetozoa exhibited in the Department of Botany, British Museum (Natural History) (London).—Ninth Annual Report of the Liverpool Marine Biology Committee and their Biological. Station at Port Erin : Prof. W. A. Herdman (Liverpool).
SERALS.—National Review, January (Arnold).—Norges Geologiske Undersögelse, Nos. 10 to 17 (Kristiania).—Bulletin of the American Mathematical Society, December (New York).—Geographical Journal, January (Williams).—Zeitschrift für Wissenschafte Zoologie, Sechzigster Band, Drittes Heft (Williams).—Annals of Scottish Natural History, January (Edinburgh, Douglas).—Proceedings of the Aristotelian Society, January (Edinburgh, Douglas).—Proceedings of the Aristotelian Society, January (Williams).—Zeitschrift Gur Wissenschafte Zoologie, Sechzigster Band, Drittes Heft (Williams).—Annals of Scottish Natural History, January (Williams).—Zeitschrift Sur Y 24 (Macmillan).—Journal of the Royal Agricultural Society, Decumber (Nase des Science

## CONTENTS.

PAGE

<b>Functions</b>
Functions
elf :
'Rambles in Japan, the Land of the Rising
Manual of Botany"
Manual of Botany"
Editor :
of an Ice AgeSir Robert S. Ball,
Dr. Alfred R. Wallace, F.R.S 220-
System.—F. G. Brook-Fox 222
of the Cuckoo.—Annie Ley
Centipede I. Llovd Bozward : R. I.
223
xperiment on the Nodes of a BellG.
223
Temperature of Hydrogen Dr. G. H.
. R.S
Whale and its Food By I Y
R.S
ical Column:-
t of Nutation
erolite. By Harwood Brierley 230
Photography, By M. Angot 230
Magazines
ss in Optics. By Prof. W. LeConte
233
Educational Intelligence
15
cademies
ties
lets, and Serials Received 240
beservations in the Northern and Southern res.—Major-General H. S. Schaw, System.—F. G. Brook-Fox 222 of the Cuckoo.—Annie Ley 223 Centipede.—J. Lloyd Bozward; R. I. Experiment on the Nodes of a Bell.—G. Temperature of Hydrogen.—Dr. G. H. .R.S. 223 Whale and its Food. By J. Y. .R.S. 223 ical Column:— tography by Simple Means 229 it of Nutation 229 erolite. By Harwood Brierley 230 of the Paris Academy of Sciences 230 I Photography. By M. Angot 230 Magazines 232 is in Optics. By Prof. W. LeConte 