

state of the testicular interstitial gland and the state of the nuptial adornment (change in colour of plumage). There is no such connection between the nuptial adornment and the intratubular seminal gland.—C. Oberthür and C. Houbert: Convergence or parallel variation in the genus *Holimede*.—M. and Mme. G. Villedieu: Contribution to the study of anticryptogamic copper mixtures. The spores of *Phytophthora* (potato "disease") germinate freely in solutions of copper bicarbonate, but solutions of sodium sulphate (0.18 per cent.), potassium chloride (0.15 per cent.), sodium chloride (0.15 per cent.), or potassium nitrate (0.2 per cent.) arrest completely the germination of mildew. It would appear that the presence of copper in Bordeaux or Burgundy mixtures is of doubtful utility.—M. Aron: The determinism of secondary sexual characters in Tritons.—P. Nottin: The increased solubility and diastatic degradation of the nitrogenous materials of maize. Application to yeast manufacture.

ROYAL ANTHROPOLOGICAL INSTITUTE, at 8.15.—Capt. T. A. Joyce: The Paquecha of Ancient Peru.—Miss A. C. Breton: Notes on Some Peruvian Antiquities.
ROYAL SOCIETY OF MEDICINE (Psychiatry Section), at 8.30.—Dr. B. Pierce: Recovery.

WEDNESDAY, APRIL 12.

ROYAL ASTRONOMICAL SOCIETY, at 5.—Major W. J. S. Lockyer: The Relationship between the Solar Prominences and the Corona.
GEOLOGICAL SOCIETY OF LONDON, at 5.30.—Prof. A. C. Seward: A Collection of Carboniferous Plants from Peru.—F. W. Edwards: Oligocene Mosquitoes in the British Museum, with a Summary of our present Knowledge concerning Fossil Culicidae.—Miss M. E. J. Chandler: The Geological History of the Genus *Stratiotes*: an Account of the Evolutionary Changes which have occurred within the Genus during the Tertiary and Quaternary Eras.
INSTITUTION OF AUTOMOBILE ENGINEERS (at Institution of Mechanical Engineers), at 8.—A. F. Evans: Marine Engine Design as affected by Lifeboat Service Conditions.
ASSOCIATION OF ENGINEERS-IN-CHIEF (at St. Bride's Institute, Bride Lane, E.C.4), at 8.—W. H. Booth: The Artesian Wells and Geological Strata of London.

THURSDAY, APRIL 13.

OPTICAL SOCIETY (at Imperial College of Science and Technology), at 7.30.

FRIDAY, APRIL 14.

MALACOLOGICAL SOCIETY OF LONDON (at Linnean Society).

Official Publications Received.

Department of the Interior: United States Geological Survey. Forty-second Annual Report of the United States Geological Survey to the Secretary of the Interior for the Fiscal Year ended June 30, 1921. Pp. 108. (Washington: Government Printing Office.)
Thirty-fifth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1913-1914. (In 2 parts.) Part II. Pp. viii+795-1481. (Washington: Government Printing Office.)
Annual Report of the Director, United States Coast and Geodetic Survey to the Secretary of Commerce for the Fiscal Year ended June 30, 1921. Pp. 147+36 charts. (Washington: Government Printing Office.)
Department of the Interior: Bureau of Education. Bulletin, 1921, No. 8: Foreign Criticism of American Education. By W. J. Osburn. Pp. 158. (Washington: Government Printing Office.)

Diary of Societies.

FRIDAY, APRIL 7.

DIESEL ENGINE USERS' ASSOCIATION (at Institution of Electrical Engineers), at 3.—H. Moore: Some Characteristics of Petroleum Oil used in Diesel Engines.
LONDON SOCIETY (at Royal Society of Arts), at 4.30.—Dr. C. W. Saleeby: More Light on London: or the Coal Smoke Curse and the Restoration of Daylight.
FOOD EDUCATION SOCIETY (at Caxton Hall, Westminster), at 5.30.—Miss A. D. Muncaster, and others: Discussion on Feeding in Institutions, with special reference to School Diet.
ROYAL AERONAUTICAL SOCIETY (Students' Section) (at 7 Albemarle Street), at 6.45.—Prof. L. Baird: Some Aeronautical Problems of the Early Future.
JUNIOR INSTITUTION OF ENGINEERS, at 8.—J. W. Maple: Engineering in Southern Persia.
ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Sir Ernest Rutherford: Evolution of the Elements.

SATURDAY, APRIL 8.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir Ernest Rutherford: Radioactivity (6).
INTERNATIONAL COLLEGE OF CHROMATICS (at Caxton Hall), at 3.15.—E. K. Robinson: Trees: their Colours and Coloration.

MONDAY, APRIL 10.

VICTORIA INSTITUTE (at Central Buildings, Westminster), at 4.30.—T. Roberts: Seven Decisive and Suggestive Scenes in the History of the Secular Contest between Conscience and Power.
ROYAL GEOGRAPHICAL SOCIETY (at Lowther Lodge, Kensington Gore), at 5.—C. S. Fox, and others: Discussion on Dr. Heron's Report on the Geology of the Mount Everest Region.
ARISTOTELIAN SOCIETY (at University of London Club, 21 Gower Street, W.C.1), at 8.—Dr. G. E. Moore, Prof. G. Dawes Hicks, and Miss L. S. Stebbing: Discussion on Dr. McTaggart's "Nature of Existence."
SURVEYORS' INSTITUTION, at 8.—R. Cobb: Agricultural Valuations.

TUESDAY, APRIL 11.

ROYAL SOCIETY OF MEDICINE (Therapeutics and Pharmacology Section), at 4.30.—Annual General Meeting.
ROYAL SOCIETY OF MEDICINE, at 5.—General Meeting.
INSTITUTION OF PETROLEUM TECHNOLOGISTS (at Royal Society of Arts), at 5.30.—A. Millar: Galicia and its Petroleum Industry.
ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 7.—Dr. H. B. Goodwin: Photographic Portraiture, Pure and Simple.
QUEKETT MICROSCOPICAL CLUB, at 7.30.—J. Wilson: A Short Account of the Genus *Closterium*.—L. E. Brown: Imitative and Windowed Plants.

CONTENTS.

	PAGE
The Development Fund	433
The Teaching of Physics	433
The Principles of Distillation	434
Mathematical Analysis. By Prof. G. H. Hardy, F.R.S.	435
Greek and Arab in Medicine. By Dr. Charles Singer	438
Elementary Meteorology. By Capt. C. J. P. Cave	440
Freshwater Ciliate Infusoria and Heliozoa. By S. J. H.	441
Our Bookshelf	443
Letters to the Editor:—	
Atmospheric Refraction.—Dr. John Ball	444
Diffraction by Molecular Clusters and the Quantum Structure of Light.—Prof. C. V. Raman	444
The Radiant Spectrum. (<i>With illustration.</i>)—Dr. H. Hartridge	445
Land Snails of the Madeira Islands.—Prof. T. D. A. Cockerell	446
Optical Rotatory Dispersion. (<i>With diagrams.</i>) By Prof. T. M. Lowry, F.R.S., and Dr. P. C. Austin	447
Obituary:—	
Dr. G. B. Mathews, F.R.S. By W. E. H. B.	450
Dr. J. T. Merz	451
Col. Sir Henry Thuillier, C.B.	452
Prof. J. A. Green. By H. R.	452
Current Topics and Events	453
Our Astronomical Column:—	
A Study of Obscure Nebulae	455
Spectroscopic Study of Procyon's Orbit	455
Recent Magnitudes of Novæ	455
Research Items	456
The British Cotton Industry Research Institute. (<i>With illustrations.</i>)	457
The National Institute of Industrial Psychology	459
Gas Cylinders Research	460
University and Educational Intelligence	460
Calendar of Industrial Pioneers	461
Societies and Academies	461
Official Publications Received	464
Diary of Societies	464