

inside the equations have to be modified by adding the convection current to the displacement current, as done by Fitzgerald.—The contact-phenomena at the junction of Lias and Dolerite at Portrush: Prof. G. A. J. Cole. The paper describes the microscopic characters of the rocks at and near the junction of Dolerite (or basalt) and calcareous Lias shale at Portrush—a junction of considerable interest in the history of geological opinion. The silicification of the shale is accompanied by the production of abundant minute crystals of a pale green pyroxene. The "bronzite" of Portlock and Oldham, named by them with some hesitation, proves to be a brown mica, locally developed after the formation of the pyroxene. The author has had the advantage of using the original specimens collected by Portlock's survey. Some details as to the later sheets and veins of dolerite are given, and the occurrence in them of differentiation, by gravitation of ferromagnesian minerals to their under surfaces, is compared with similar cases elsewhere.

PARIS.

Academy of Sciences, November 19.—M. H. Poincaré in the chair.—The inflorescence of the seed-bearing ferns of the Culm and the Coal-measures: M. Grand'Eury.—Observations of the new comet (1906g), made at the Observatory of Besançon with the bent equatorial: P. Chofardet.—Curves reproduced periodically by the transformation $(X, Y; x, y, y')$: S. Lattès.—A family of hyper-elliptic surfaces of the fourth order: L. Remy.—A theory of magneto-optic phenomena in crystals: Jean Becquerel.—The heat of combustion and formation of some cyclic nitrogen compounds: P. Lemoult. From the experimental data given in this paper the author calculates the thermal changes in passing from nitro-compounds to oxyazo-compounds, from the latter to azo-bodies, from azo- to hydrazo-compounds, and from the last to amines.—The isomorphous crystals of lead nitrate and barium nitrate: P. Gaubert. A mixed crystal of lead and barium nitrates is not homogeneous, in spite of its transparency and limpidity: it is constructed of groups of pyramids the composition of which varies with the nature of the faces to which they correspond. The results are applied to the explanation of a similar structure frequently found in minerals.—The distribution of *Anopheles maculipennis* in the neighbourhood of Lyons: A. Conte and C. Vaney. The reduction in the amount of malaria in this region is much greater than would be expected from the slight reduction in the numbers of mosquitoes that has taken place in recent years. The possible causes of this are discussed.—The consumption of the glucose of the blood by the tissue of the mammary gland: M. Kaufmann and H. Magne. The experiments cited are all in favour of the theory of the transformation of the glucose into lactose in the mammary tissue in secretory activity.—Study of the variations of the mass of the blood in man: Gabriel Arthaud.—Chromotropism and its artificial inversion: Romuald Minkiewicz.—The stroma of the red corpuscles: MM. Piettre and Vila. A new method of separating the stroma is described.—Experimental researches demonstrating that anthracosis of the lungs is due to inhalation, and not to the deglutition of atmospheric dust: —.—The presence of the spirochæta of Schaudinn in the testicle of a new-born syphilitic infant: Ch. Fouquet.—The fractionation of the rare gases in mineral waters: the proportions of helium: Charles Moureu and Robert Biquard.—The hydrology of the Bulgarian Dobroudja: M. De Launay.

DIARY OF SOCIETIES

FRIDAY, NOVEMBER 30.

ROYAL SOCIETY, at 4.—Anniversary Meeting.
INSTITUTION OF CIVIL ENGINEERS, at 8.—Applications of Electricity in Printing-works: P. A. Spalding.
INSTITUTION OF MECHANICAL ENGINEERS, at 8.—Steam as a Motive Power for Public Service Vehicles (Discussion): T. Clarkson.
MONDAY, DECEMBER 3.
SOCIOLOGICAL SOCIETY (Research Meeting), at 8.—Mating, Marriage and the Status of Women: S. S. Buckman.
SOCIETY OF CHEMICAL INDUSTRY, at 8.—The Direct Estimation of Antimony: H. W. Rowell.—Bacterial Method of Investigating Disinfectants: M. Wynter Blyth.—The Detannation of Solutions in the Analysis of Tanning Materials: Dr. J. Gordon Parker and H. G. Bennett.
SOCIETY OF ARTS, at 8.—Artificial Fertilisers: Nitrogenous Fertilisers: A. D. Hall.

TUESDAY, DECEMBER 4.

SOCIETY OF ARTS, at 4.30.—The Cape to Cairo Railway: The Hon. Sir Lewis Michell.
INSTITUTION OF CIVIL ENGINEERS, at 8.—The Talla Water-supply of the Edinburgh and District Waterworks (Discussion): W. A. P. Tait.—Repairing a Limestone-concrete Aqueduct: M. R. Barnett.—The Yield of Catchment-areas: E. P. Hill.
ANTHROPOLOGICAL INSTITUTE, at 8.15.—Village Deities in Southern India: Lord Bishop of Madras.

WEDNESDAY, DECEMBER 5.

ENTOMOLOGICAL SOCIETY, at 8.
SOCIETY OF ARTS, at 8.—The Metric System: Sir Charles M. Watson.
GEOLOGICAL SOCIETY, at 8.—On the Geological Conditions which have contributed to the Success of the Artesian Boring for Water at Lincoln: Prof. Edward Hull, F.R.S.—Notes on the Raised Beaches of Taital (Northern Chile): O. H. Evans.

THURSDAY, DECEMBER 6.

ROYAL SOCIETY, at 4.30.—*Probable Papers*: A Comparison of Values of the Magnetic Elements deduced from the British Magnetic Survey of 1891 with Recent Observation: W. Ellis, F.R.S.—The Theory of the Composition of Numbers, Part ii.: Major P. A. MacMahon, F.R.S.—On the Transpiration Current in Plants: Prof. Henry H. Dixon.—The Theory of Photographic Processes, Part iii., The Latent Image and its Destruction, an Abstract: S. E. Sheppard and C. E. K. Mees.—The Chemistry of Globulin: W. Sutherland.
CHEMICAL SOCIETY, at 8.30.—The Liquid Volume of a Dissolved Substance: J. S. Lumsden.—Some Derivatives of Benzophenone; Synthesis of Substances occurring in Coco-bark (preliminary notice): W. H. Perkin, jun., and R. Robinson.—A Synthesis of Terebic, Terpenylic and Homoterpenylic Acids: J. L. Simonsen.
LINNEAN SOCIETY, at 8.—*Papers*: A Contribution to the Physiology of the Museum Beetle, *Antheus muscorum* (Linn.): Prof. A. Ewart.—Note on the Origin of the Name *Chermes* or *Kermes*: E. R. Burdon.—*Exhibitions*: An Abnormal Specimen of a Dab with Three Eyes: Dr. A. T. Masterman.—A Note on *Siegesbeckia orientalis*, Linn.: Rev. H. Purofoy FitzGerald.
INSTITUTION OF ELECTRICAL ENGINEERS, at 8.—Selection and Testing of Materials for Construction of Electric Machinery: Prof. J. Epstein.

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