

of sedimentary formations, are divisible into two members; the lower, consisting chiefly of quartz-slates and quartzites, contains ores of copper and iron; the upper, formed by mica-slates, red gneiss, calcareous and amphibolic slates, includes the so-called black iron ores and manganese ores of Takoben and Dorna. The sedimentary rocks are red sandstone, triassic limestone, lower and upper Neocomian, Cenomanian, Nummulitic rocks, and higher up the large masses of Carpathian sandstone. Besides the regular survey, almost all the members of the Institute made particular inquiries in different parts of the empire, partly for exclusively scientific purposes, but chiefly for the solution of questions of practical interest. An important discovery was thus made by Dr. Stache; he found in the slates south of the Gaiethal in Carinthia numerous Graptolites, the first certain proof of the existence of Silurian rocks in the southern Alps.

## PARIS

Academy of Sciences, Dec. 16.—M. Faye, president, in the chair. The president of the Institute informed the Academy that its first general meeting for 1873 would be held on January 8, and wished the Academy to appoint a member to represent it as reader on that occasion.—General de Cissey, Minister of War, announced that his department had decided on the re-termination of the French meridian which has at present many errors, as it is advisable that the French section of the great line extending from Shetland to the Sahara should equal in accuracy the English, Spanish, and Algerian portions. Captain Perrier is to have charge of the work, and the Academy is asked to appoint a committee of revision.—The president then read an addition to his physical theory of the sun explaining the nature of the spots. He defends his theory against some recent criticisms of Messrs. Spencer and Kirchhoff. He regards the spots as produced by cyclones which form a funnel-shaped cavity in the photo-sphere. Round the edge of this hole the photosphere and chromosphere are heaped together, and into it masses of cooler atmosphere are drawn by the vortex, and they then exert their absorptive power.—M. Jamin read a note on the distribution of magnetism.—M. Belgrand then read a second note on the floods of the Seine.—M. Daubrée read a note on a meteorite which fell near Bandung, Java; the governor of the Dutch Indies had sent a portion to the museum. An analysis has been published in the Archives Néerlandaises of Haarlem, vol. vi. 1871, by Mr. Von Baumhauer. The meteorite contains iron, nickel, cobalt, chromium, manganese, magnesium, aluminium, sodium, potassium, calcium, oxygen, sulphur, and silicon.—M. Fréd. Kuhlmann then read an account of a search for iodine and bromine in some phosphatic minerals, iodine was distinctly recognised, but bromine if present was only there in inappreciable quantities.—M. F. Perrier read a note on a new determination of the French meridian.—The *Phylloxera* Commission presented extracts from two papers by MM. M. x Cornu and E. Duclaux: they also asked permission to present their report at an early date. Notes on the same subject were received from MM. R. Shore and Aljerly.—M. de Wissocq presented a paper entitled "A Study of the Works required to prevent the Floods of the Loire"—M. Sacc sent a letter on the preservation of food, which was referred to the commission on that subject.—M. F. Perrier read an answer to a note of M. Laussedat on the prolongation of the Spanish meridian into Algeria. The answer related partly to questions of priority as concerns the proposed prolongation.—M. F. Lucas presented some observations on a note on mathematical physics, by M. Quec.—M. Gernez sent a note on the supposed action of thin films of liquids on supersaturated solutions. The author asserts that Tomlinson and Van der Mensbrugge are deceived in their idea that films cause crystallisation. M. Gernez states that this is not caused by a film *per se*, but by crystalline particles contained in it.—M. A. Trévc read a note on magnetism, which was followed by a note by MM. Troost and Hautefeuille on some derivatives of the oxychlorides of silicon.—M. A. Boillot read a note on a new method of preparing ozone by means of carbon. The carbon is employed as the conducting film on the surface of the ozoniser. M. Gérardin presented a note on the amount of oxygen dissolved in rain water and in that of the Seine. Fine and persistent rain contains less oxygen than that of heavy and short showers.—Next came a note from M. Lortet on penetration of *leucocytes* into the interior of organic membranes.

## DIARY

FRIDAY, JANUARY 3.

GEOLOGISTS' ASSOCIATION, at 8.—On the Cambrian and Silurian Rocks of Ramsey Island, St. David's: Henry Hicks.—On the Dipironidæ of the Moffat Shale: Charles Lapworth.

SUNDAY, JANUARY 5.

SUNDAY LECTURE SOCIETY, at 4.—The next Transit of Venus, and the measurement of the distances of the Planets from the Sun: W. J. Lewis.

MONDAY, JANUARY 6.

LONDON INSTITUTION, at 4.—On Air, Earth, Fire, and Water: Prof. Armstrong (Holiday Course, II.)  
ENTOMOLOGICAL SOCIETY, at 7.  
SOCIETY OF BRITISH ARCHITECTS, at 8.  
MEDICAL SOCIETY, at 8.  
VICTORIA INSTITUTE, at 8.

TUESDAY, JANUARY 7.

PATHOLOGICAL SOCIETY, at 8—Anniversary.  
ANTHROPOLOGICAL INSTITUTE, at 8.—The Atlantean Race of Western Europe: The late J. W. Jackson.—The Kojahs of Southern India: Dr. John Shortt.—Primordial Inhabitants of Brazil: M. H. Gerber and Capt. Burton.  
SOCIETY OF BIBLICAL ARCHAEOLOGY, at 8.30.  
ZOOLOGICAL SOCIETY, at 8.30.—Contributions to a general History of the Spongiadæ (Part IV): Dr. Bowerbank—Report on a Collection of Sponges found at Ceylon, by E. W. H. Holdsworth: Dr. Bowerbank.—On the Value in Classification of a peculiarity in the anterior margin of the Nasal Bones of some Birds: A. H. Garrod.  
ROYAL INSTITUTION, at 3.—Juvenile Lectures—On Air and Gas: Prof. Odling.

WEDNESDAY, JANUARY 8.

GEOLOGICAL SOCIETY at 8.—On the Secondary Rocks of Scotland.—Part I. The Strata of the Eastern Coast: J. W. Judd.—Observations on the more remarkable Boulders of the North West of England and the Welsh Borders: D. Mackintosh.  
GRAPHIC SOCIETY, at 8.  
ROYAL SOCIETY OF LITERATURE, at 8.  
ARCHAEOLOGICAL ASSOCIATION, at 8.

THURSDAY, JANUARY 9.

ROYAL SOCIETY, at 8.30.  
SOCIETY OF ANTIQUARIES, at 8.30.  
ROYAL SOCIETY CLUB, at 6.  
MATHEMATICAL SOCIETY, at 8.—On Parallel Surfaces: S. Roberts.—Summation of certain Series: Prof. Wolstenholme.  
ROYAL INSTITUTION, at 3.—Juvenile Lectures—On Air and Gas: Prof. Odling.

## BOOKS RECEIVED

ENGLISH.—Faith and Free Thought: S. Wilberforce (Hodder and Stoughton).—A Series of Botanical Labels for Herbaria: J. E. Robson (Hardwicke).—The Coal-Fields of Great Britain. 3rd edit.: E. Hull (Stanford).—Reprint of Papers on Electrostatics and Magnetism: Sir William Thomson (Macmillan & Co.).

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