

tion of the perturbations which each of these four planets undergo by the action of the other three.—A letter was read from Father Secchi, containing a summary of observations of solar protuberances from Jan. 1 to April 29, 1872, containing a tabular exposition of the results of observations, with a discussion of their bearing upon the general question.—M. Delaunay presented an extract of a letter from M. Förster on the magnetic disturbances observed during the occurrence of auroras.—M. Coste communicated a note by M. Z. Gerbe on the segmentation of the cicatricula in the ovum of plagiostomous fishes, in which the author describes the evolution of the Rays in confirmation of the opinion put forward by M. Coste that in the plagiostomous fishes, as in reptiles and birds, it is the cicatricula alone that undergoes segmentation. M. Coste also communicated a notes by M. G. Pouchet, on blue colorations in fishes, in which the author ascribes the blue colours presented by some parts of certain fishes to the presence beneath the skin of oval or roundish bodies which he calls "iridising bodies."—A note by M. E. Prillieux, on the influence of congelation upon the weight of vegetable tissues, was presented by M. Duchartre.—M. A. Rivière read a memoir on the oolitic or Jurassic formation of La Vendée, accompanied by a geological map of that locality.—M. H. Douvillé presented a note on the coal-bearing strata of the banks of the Rhine, with especial reference to the distribution of these deposits into an upper and lower formation, the deposition of which was separated by a great dislocation.—M. S. Meunier presented a mineralogical investigation of the grey serpentines, from which it results that these rocks consist essentially of a mixture of magnetite, pyroxene, peridot, and magnesite.—M. A. Leymerie communicated a note in reply to a recent communication by M. Garrigou on the unity of composition of the Pyrenees.

May 27.—M. Serret presented a memoir by M. V. J. Berton on the determination of the limits between which a primary number of a given form occurs.—M. Chasles presented a note by Mr. A. Cayley on a flattened quartic surface; M. Ribaucour a note on the developates of surfaces.—A note by M. C. Jordan on the infinitely small oscillations of material systems was presented by M. Yvon Villarceau.—M. Faye presented a reply by M. Respighi to a recent note by Father Secchi on some peculiarities of the constitution of the sun.—M. Le Verrier communicated a note by Father Denza on meteors observed in Piedmont on the evening of April 24, including the account of a second meteor in addition to that seen at Agde by M. Perris. The author also notices the occurrence of a fine aurora on May 9.—M. Becquerel read a note on the cultivation of the vine in clay soils, in which he indicated the conditions of temperature prevailing in clay, silicious, and calcareous soils, and showed that in the former the vine could only be successfully cultivated by training it to a considerable height.—M. W. de Fonvielle presented a note embodying some fresh examples of the danger arising from the vicinity of metallic masses during storms, and M. E. Nasse forwarded a note on an instance of globular lightning observed at Brives on May 17.—M. Delaunay presented a note by M. Frou on the laws of cyclones and tempests, and on their geometrical representations.—A considerable number of papers on chemical subjects was presented, namely, a memoir on the iron contained in the blood and in food by M. Boussingault, containing a great number of interesting details upon this important subject; a note by M. A. Wurtz on an aldehyde-alcohol, C⁴H⁸O², which he proposes to name *aldol*; a note by M. G. Bouchardat on a new organic base, dulcitamine, C¹²H¹⁵NO¹⁰, derived from dulcite, presented by M. A. Wurtz; a note by M. T. Schloësing on the influence of vegetable mould on the mobility of soils, communicated by M. Peligot; a memoir by Mr. F. Crace-Calvert on bleaching powder, presented by M. Balard; a note by M. B. Renault on a new process for obtaining reproductions of drawings, also presented by M. Balard; and a note by M. Sidot on the production of a crystallised phosphuret of iron, presented with some remarks by M. Daubrée.—M. Cl. Bernard communicated a paper by M. Z. Pupier, containing an experimental demonstration of the action of spirituous beverages upon the liver; the author's experiments were made upon fowls and rabbits.—A note by MM. N. and E. Joly on the supposed Crustacean, on which Latreille founded the genus *Prosopistoma*, was presented by M. Milne-Edwards; the authors show that this animal is a true insect probably allied to the Ephemera.—M. Blanchard communicated a note by M. S. Jourdain on the anurous Batrachia with large and small tadpoles, in which the author insists upon an analogy between the development of the former

and that of insects.—M. de Vibraye communicated a note on the spontaneous appearance in France of exotic forage-plants consequent on the presence of the belligerent armies in 1870-71.—M. P. Gervais presented a note on the mammalia of which the bones are associated with the deposits of phosphate of lime in the departments of Tarn-et-Garonne and the Lot. These bones appear to belong to various epochs, the oldest belonging to the fauna of the Paris gypsum, others to the Miocene or more recent times. The genera represented are *Anoplotherium*, *Dichobunz*, *Entelodon*, *Cainotherium*, *Amphitragulus*, *Palæotherium*, *Rhinoceros*, *Hyaenodon*, *Canis*? (*palæolyxos*, sp. n.) and *Viverra*? (*ambigua*, sp. n.) At Caylux there are Rodents allied to *Theridomys*, with remains of *Chalicotherium*, *Anthracootherium*, and *Antelope*? *boodon*.—M. Daubrée made some remarks on the deposits from which the fossils noticed by M. Gervais are derived.—M. de Verneuil read a note on the recent eruption of Vesuvius, which also formed the subject of a communication from M. Guiscardri.

BOOKS RECEIVED

ENGLISH.—Experimental Chemistry, founded on the work of Dr. J. A. Stöckhardt: C. W. Heaton (Bell and Daldy).—Knapsack Manual for Sportsmen in the Field: E. Ward (Bradbury and Evans).

DIARY

THURSDAY, JUNE 6.

ROYAL INSTITUTION, at 3.—On Heat and Light: Prof. Tyndall, F.R.S. SOCIETY OF ANTIQUARIES, at 8.30.—Excavations at Rome, 1871-2: J. H. Parker, C.B., F.S.A. LINNEAN SOCIETY, at 8.—On some recent forms of *Lagenæ* from Deep-Sea Dredgings in the Japanese Seas: F. W. O. Rymer Jones.—On the Cutaneous Exudation of the Water Newt (*Triton cristatus*): Miss Eleanor A. Ormerod. CHEMICAL SOCIETY, at 8.

FRIDAY, JUNE 7.

GEOLOGISTS' ASSOCIATION, at 8.—On the Classification of the Cambrian and Silurian Rocks: H. Hicks.—On the Silurian Rocks of the English Lake District: Prof. A. Nicholson, M.D.

SATURDAY, JUNE 8.

GOVERNMENT SCHOOL OF MINES, at 8.—On Geology: Dr. Cobbold, F.R.S.

MONDAY, JUNE 10.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.

TUESDAY, JUNE 11.

PHOTOGRAPHIC SOCIETY, at 8.—On some early Glass Pictures produced by the late Sir John Herschel, Bart.: Prof. A. S. Herschel, B.A., F.R.A.S.—On the Photographic Manipulations undertaken at the last Eclipse, practically described: Capt. Waterhouse, Assistant Surveyor-General of India.—Spectroscopic Observations in connection with the Carbon Process: Lieut. Abney, R.E.—On the Use of Uranium in Dry Plate Photography: Colonel Stuart Wortley.

THURSDAY, JUNE 13.

ROYAL SOCIETY, at 8.30. SOCIETY OF ANTIQUARIES, at 8.30. MATHEMATICAL SOCIETY, at 8.—On the Surfaces divisible into Squares by Curves of Curvature: Prof. Cayley.—On Prof. Cremona's Transformation between Two Planes and Tables relating thereto: Mr. S. Roberts.—On a Manifold Correspondence of Two Planes: Dr. Hirst.

CONTENTS

	PAGE
BAD GREEK OR GOOD GERMAN ?	97
OUR NATIONAL INDUSTRIES	97
THE HIGHLANDS OF CENTRAL INDIA. By Lieut. M. T. SALE, R.E.	99
OUR BOOK SHELF	100
LETTERS TO THE EDITOR:—	
Spectroscopic Nomenclature.—Prof. C. A. YOUNG	101
Historical Note on the Method of Least Squares.—Prof. ASAPH HALL	101
The Volcanoes of Central France.—E. L. GARRETT	102
Temperature of the Deep Sea	102
ENDOWMENT OF PROFESSORSHIPS	102
GLAISHER'S (HALL'S IMPROVED) RAIN GAUGE. By J. J. HALL. (With Diagram)	103
WATER ANALYSIS.—I.	104
RADIATION AT DIFFERENT TEMPERATURES. By Capt. J. ERICSSON. (With Illustrations)	106
NOTES	108
ANNIVERSARY ADDRESS TO THE LINNEAN SOCIETY. By GEO. BEN-THAM, F.R.S.	111
SCIENTIFIC SERIALS	113
SOCIETIES AND ACADEMIES	113
BOOKS RECEIVED	116
DIARY	116