

SCIENTIFIC SERIALS

Geological Magazine, September.—This number contains four original articles:—(1) The grouping of the Permian and Triassic rocks, by H. B. Woodward, F.G.S. The object is to show that the supposed break between the subdivisions of the Triassic rocks in England rests on unsatisfactory evidence; that in the Permian beds there are evidences of unconformity; and that probably future researches will lead to the resumption of the term "Poikilitic" to embrace both the Permian and Trias.—(2) On the Pleistocene deposits yielding Mammalian remains in the vicinity of Ilford, Essex, by Messrs. Woodward and Davis. This article consists partly of references to previous numbers of the magazine, the chief feature of interest in it being a letter by Mr. Searles Wood. He formerly believed the Ilford brick earths were older than the main sheet of the Thames gravel; a view which he now corrects.—(3) On the remains of *Rhinoceros leptorhinus*, Owen, from the Pleistocene of Ilford, by the editor. This is a reprint of Mr. Davis's description of the skull, as given in Sir Antonio Brady's catalogue (privately printed), together with an extract from Dr. Falconer's palæontological memoirs.—(4) On West Indian Tertiary Fossils, by R. J. Lechmere Guppy; a first instalment of descriptions which are to be continued.—Mr. J. W. Barkas, in a letter, announces that he has found a jaw of *Amphicentrum*, in sub-carboniferous limestone near Richmond, and suggests that it must have lived both in fresh and salt waters, like some modern fishes.

Astronomische Nachrichten, No. 2,005.—L. Seidel contributes a paper on the estimation of the most probable value of a number of varying observations of the same phenomenon, as the value of a number of observations of the position of a double star. There are also a quantity of position observations on Coggia's comet, by C. H. Davis, Ant. Aguilar, and Alexander Gromadzki, and the following elements of this comet are found by W. Fabricius:—

T = July 8.90006
 Log. q = 9.829699
 Ω = 118° 44' 9".6
 i = 66° 23' 1".0
 ω = 152° 21' 42".4

The opposition ephemeris of the planet Hecate (100) is contributed by Dr. J. E. Stark for each day from Sept. 17 to Oct. 27.—Prof. Spoerer sends a table of his observations on solar spots and protuberances for June. Capt. Herschel writes to ask for letters of Sir J. Herschel, stating that a collection is being made.

SOCIETIES AND ACADEMIES

PARIS

Academy of Sciences, Sept. 7.—M. Frémy in the chair.—M. Resal presented the Academy with the second volume of his "Traité de Mécanique Générale," and made some remarks thereon.—M. P. Volpicelli addressed a letter to the president, stating that in 1854 Melloni had communicated a note to the Academy, entitled "Researches on Electrostatic Induction." Fifteen days afterwards the Italian physicist died of cholera at Naples, and since that time the author (M. Volpicelli) had submitted fifteen communications to the Academy on the same subject, all of which confirmed Melloni's theory of electrostatic induction. M. Volpicelli now begs the Academy to appoint a commission to report on these experiments, and expresses a hope of being permitted to repeat them before it. MM. Becquerel, Faye, Frémy, Edm. Becquerel, and Jamin were named commissioners.—Sixth note on the electric conductivity of ligneous bodies, by M. Th. du Moncel.—Presence of zircosyenite in the Canary Isles, by M. Stan. Meunier. The mineral was found in a collection made by M. Webb on the Pena Mountains.—On some laboratory experiments concerning the action of toxic gases on *Phylloxera*; actual state of the malady in the Charente provinces; extract from a letter from M. Maurice Girard to M. Dumas. The gas tried was that liberated from a sulpho-carbonate. Pieces of brick saturated with the solution of the salt were placed in the bottoms of flasks; above the solution and saturated brick some strong paper was supported on which were placed phylloxerised roots. The roots thus escaped direct contact with the solution and received only the gases evolved (CS₂ and H₂S). At the end of twenty-four hours nearly all the insects were dead, with the exception of some small

larvæ and some eggs; at the end of two days all the insects and the greater part of the eggs were dead; while at the end of four days complete death of the eggs took place. During the experiment the flasks were kept in the dark, and some control flasks containing phylloxerised roots only placed with the others; nearly all the insects and eggs survived in these last flasks.—On some new points in the natural history of *Phylloxera vastatrix*; a letter from M. Lichtenstein to M. Dumas. The author thus sums up the life history of the insect so far as at present known:—(1) Colonising females appearing probably in August and September; (2) small uniform progeny hibernating; (3) Oval, pyriform, testudiniform types, reproducing by parthenogenesis all the summer; (4) Pupæ of two forms, oval and narrow at the waist, specially found on the nodosities of the rootlets in June and July; (5) *Swarming* takes place in August: the insects emerge from the earth in myriads exactly as in a formicary when the winged insects escape; (6) Laying of eggs on the leaves of *Quercus coccifera*, end of August; (7) Birth of sexual apterous individuals. Copulation and production of colonising females.—On some processes for destroying *Oidium* and *Phylloxera*; extract from a letter from M. Desloges to M. Dumas.—Employment of the lime from gas purifiers to check *Phylloxera*; extract from a letter from M. L. Petit to M. Dumas.—Observation of an extraordinary passage of corpuscles across the sun; a telegram from M. Gruy, of the Toulouse Observatory, to the president. The passage took place on the 5th, 6th, and 7th of the present month.—On some applications of Abel's theorem relating to elliptic functions to curves of the second degree, by M. H. Léauté.—Note on magnetism, by M. F. M. Gauguin; a continuation of former researches.—Note on the nature of the sulphurising compound mineralising the thermal waters of the Pyrenees, by M. E. Filhol.—Note on chlorophyll, by M. E. Filhol. The chlorophyll of monocotyledons (Graminæ, Cyperaceæ, Liliacæ, &c.) treated with a small quantity of hydrochloric acid becomes turbid, and the solution, on filtration, leaves a black crystalline compound on the filter. This substance has been examined in some detail. It is remarkable that a solution of chlorophyll from dicotyledons yields, under the same treatment, a dark compound which is amorphous.—On some phenomena of localisation of mineral and organic substances in Mollusca, Gasteropoda, and Cephalopoda, by M. E. Heckel. Specimens of *Helix aspersa* and *Zonites algirus* were fed with white lead, or with acetate of lead mixed with wheat flour. An accumulation of metal was found in the liver and also in the cerebral ganglia. *Loligo vulgaris*, *Sepia officinalis*, and *Octopus vulgaris* were fed during two months with garancine (mixed with meat). In no case was the internal shell coloured, but the cephalic cartilage and all the cartilaginous portions of the skeleton of these Mollusca were coloured after an experiment of three months' duration. The author points out the necessity of distinguishing clearly the hard parts belonging to the skeleton from those belonging to the shell.—On the storm of the night of 1st to the 2nd of Sept. 1874, observed at Versailles; a note by M. Ad. Berigny. 17.59 mm. of rain fell during the storm, and the lightning struck four points in Versailles.

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ERRATUM.—P. 379, col. 2, line 8 from bottom, for *or* read *on*.