increases with the temperature.—M. A. Trécul presented the sixth portion of his memoir on the position of the tracheæ in ferns, in which he described the ramification of the petioles in various plants of that group, including several species of *Asplenium*, *Aspidium*, and *Polypodium*. — A note was read on the organs and phenomena of fecundation in the genus *Lemanea*, by M. Sirodot. The *Lemaneæ*, although among the highest of the fresh-water Algæ, were described by M. Rabenherst in 1868 as producing "spores germinating without fecundation." The author described what he regards as antheridia in two species (*L. catenata* and *L. fluviatilis*), and indicated the mode of fecundation as observed by him.—M. Ducharter communicated an abstract of two Greek papers by M. Koressios, in which the author expressed the opinion that the disease now ravaging the vines in France attacks them from the roots, and recommended a certain mode of treatment.—M. Leymerie presented, through M. Elie de Beaumont, some observations on the conclusions lately put forward by M. Magnau, with regard to the lower cretaceous formation of the Pyrenees. He maintained that there is no evidence of the existence of the Albian stage in the Pyrenees, and also objects to the admission of the Muschelkalk as existing in the Zechstein in the departments of the Tarn and Aveyron. The same author addressed a note on the fragmentary state of the higher summits of the Pyrenees, in which he maintained that the broken state of the rocks forming these summits must be due to the effects of the force exerted during their elevation, and concluded therefrom that the summits of these and other mountains cannot have lost much of their original heights by subaerial action. M. Elie de Beaumont made some remarks on the permanence of artificial earthworks, as confirmatory of the author's views.—Papers on medical subjects were also read.

PHILADELPHIA

American Philosophical Society, February 4.—Pliny E. Chase presented tables of rainfall, and described them. The most interesting deductions were, as far as related to Philadelphia, that the spring and summer will be alike, and the autumn and winter alike. The tables are for 45 years up to date, from observations at the Pennsylvania Hospital. Dr. Brinton made observations on the zealous and long-continued studies of the language of the Choctaw Indians, made by the missionary Mr. Byington, who died a year ago. Dr. Brinton has a list of over 75 works, including the Bible, printed in Choctaw. Mr. Byington's Choctaw Grammar has been revised four times, and at his death he had progressed with his fifth revision. The MS. of this work was in Dr. Brinton's hands, and was presented to the Society for publication.

February 18.—Prof. Cope read a paper intitled, "Fourth contribution to the Fauna of the Miocene period in the United States." He exhibited the periotic bones of a large whale from the miocene of North Carolina, which had been discovered by Prof. W. C. Kerr, State Geologist. The part of the skeleton found consisted of the left side of the cranium to the temporal fossa, mandible, and many vertebræ, ribs, &c. It was found 30 feet below the surface in the bank of a stream. It represented a type near the true *Balænæ*, but partaking of the characters of the *Balænopteræ*. One peculiarity was the enormous thickening of the supraorbital process of the frontal, which was 17 inches deep. This individual was 17 inches deep. Vertebræ of two other individuals were found in other places, and a complete vertebral column of the same extended across a stream 20 miles distant from Kerr's specimen. Vertebræ taken from the last, referred it to the same species. This specimen was 50 or 60 feet long, and extended across the stream in such a way as to serve as a foot-crossing when the water was very low. The species was named *Mesoteras kerrianus*. Prof. Cope mentioned the discovery of the genus *Sus* for the first time in the United States, in the neighbourhood of Squankum, N.J. He said it agreed with the occurrence of the dugong noticed by himself and the rhinoceros by Marsh in giving an Asiatic character to that extinct Fauna. The hog he called *Sus vagrans*, and said it was as large as the common *S. scrofa*. He called attention to the abundance of the species of the *Pythonomorphia* in the United States, and described two new species from New Jersey, viz., *Mosasaurus fulciatus* and *M. varthrus*. The first with round curtra and an additional rib on the asquadratum, the second with depressed ceutra, and a quadrate bone more like that of *M. dekayi* than *M. depressus*. He said he knew 27 species of *Mosasauroids*. In the last work on the subject, only three species were described.

DIARY

THURSDAY, APRIL 7.

ROYAL SOCIETY, at 8.30.—On supra-annual Cycles of Temperature in the Earth's Surface Crust: Prof. Piazzi Smyth.—Researches in Animal Electricity: Dr. C. B. Radcliffe.

SOCIETY OF ANTIQUARIES, at 8.30.

LINNEAN SOCIETY, at 8.—On new species of Annelids, &c.: Dr. Baird.—On Algæ from the North-Atlantic Ocean: Dr. Dickie.

ROYAL INSTITUTION, at 3.—Chemistry of Vegetable Products: Prof. Odling.

CHEMICAL SOCIETY, at 8.—On the Analysis of Deep-sea Water: Dr. John Hunter.—On the refraction equivalents of the aromatic Hydrocarbons and their derivatives: Dr. J. H. Gladstone.—On an acid Feed-water from the Coal-fields of Shellarton, N.S., and the results of its use: Prof. How.

LONDON INSTITUTION, at 7.30.—Geology: Dr. Cobbold.

FRIDAY, APRIL 8.

ROYAL INSTITUTION, at 8.—Pedigree of the Horse: Prof. Huxley.

ROYAL ASTRONOMICAL SOCIETY, at 8.

QUEKETT MICROSCOPICAL SOCIETY, at 8.

SATURDAY, APRIL 9.

ROYAL INSTITUTION, at 3.—The Sun: J. Norman Lockyer, F.R.S.

MONDAY, APRIL 11.

LONDON INSTITUTION, at 4.—Chemistry: Prof. Bloxam.

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.

ROYAL INSTITUTE OF BRITISH ARCHITECTS, at 8.

TUESDAY, APRIL 12.

ETHNOLOGICAL SOCIETY, at 8.—On the Danish Elements in the population of Cleveland: Rev. J. C. Atkinson.—On the Ancient Tribal System of Ireland: H. M. Westropp.—On the Brain in the Study of Ethnology: Dr. Donovan.

PHOTOGRAPHIC SOCIETY, at 8.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Dressing of Lead Ores.—Maintenance and Renewal of Railway Rolling Stock: Mr. R. Price Williams.

WEDNESDAY, APRIL 13.

ROYAL GEOLOGICAL SOCIETY, at 8.—On the Fossil Remains of Mammals found in China: Prof. Owen, F.R.S., F.G.S., &c.—Further Discovery of the Fossil Elephants of Malta: Dr. A. A. Caruana. Communicated by Dr. A. Leith Adams, F.G.S.—Brief preliminary Notes on a large Coal-measure Reptile from the Low Main Coal Shale: T. P. Barkas, F.G.S.

ROYAL MICROSCOPICAL SOCIETY, at 8.

THURSDAY, APRIL 14.

MATHEMATICAL SOCIETY, at 8.—On the Mechanical Description of a Nodal Bicircular Quartic: Prof. Cayley.

BOOKS RECEIVED

ENGLISH.—Birds of Marlborough: E. F. Im Thurn (Marlborough, Perkins; London, Simpkin and Marshall).

FOREIGN.—Die Alterthümer unserer heidnischen Vorzeit, vols. i. and ii. (Mayence, V. V. Zabern).—Journal für Ornithologie, Jan. 1870.—Om Vegetationsforholdene ved Sognefjorden: A. Blytt (Christiania, J. Dahl).—Lichenes Daniæ, eller Danmarks Laver: J. G. Deichmann Branth og E. Rostrup (Copenhagen, Gads). — Undersogelser over Christniafjordens Dybvandsfauna: G. O. Sars (Christiania, Dahl).—Zeitschrift für Parasitenkunde, vol. ii. pt. i. (Jena, Mauke).—Naturwissenshaftliche Reisen im tropischen Amerika: Dr. Wagner (Stuttgart, Cotta).—Archivio per la Zoologia l'Anatomia e la Fisiologia, Series ii. vol. i. (Turin, Loescher).—Reisen im Archipel der Philippinen: Dr. Semper, Æolidien (Wiesbaden, Kreidel).—Through Williams and Norgate.

CONTENTS

ERRATA.—In No. 21, page 539, first column, line 21 from bottom: for "Perth," read "Pesth."—In No. 22, page 557, first column, line 3 from bottom: for "Sir Sidney Smith," read "Mr. Sidney Smith."