to him to depend on the difference between dry continental air, and damp winds from sea coasts.

November 15.—Mr. Gabb described the results attained in tabulating Miocene fossils from Santo Domingo. He described 217 extinct and 19 living species, the latter found on both sides of the barrier of Central America, which is capped by Miocene rocks.

December 20.—Prof. Cope read a paper on the zoological regions of the earth, and especially those of North America, agreeing as to the first with Drs. Sclater and Wallace in the main, adopting the Australian, Neotropical, Ethiopian, Neoarctic, and Palæartic (including Palætropical of S. and W.), stating that all the southern continents present marked distinguishing characters. In North America he adopted the Pacific, Lower Californian, Sonoran, Central, Eastern, and Austroriparian, which in the main agreed with those of Baird, the last being the southern part of his eastern, as far north as the isothermal of 773 F. The subdivisions were the Floridan, Louisianian, and Texan; those of the eastern after Allen, Carolinian, Alleghanian, Canadian, and Hudsonian.—Prof. O. C. Marsh gave an account of his discoveries in the Rocky Mountains since 1870, which included the first American *Chiroptera*, *Marsupials*, low forms of *Quadrumana*, birds with biconcave vertebræ, and several species of a new order, *Dinocerata* allied to the *Proboscidia*, but with horns and canine teeth.

January 3.—Prof. P. Fraser read a paper on a hydraulic problem, near Bethlehem Penna.

CALIFORNIA

Academy of Sciences, Dec. 18, 1872. "On the Parasites of the Cetaceans of the N.W. coast of America, with Descriptions of new Forms," by W. H. Dall, U. S. Coast Survey. Among the parasites most widely known as infecting the Cetacea, two classes may be recognised, viz., those which are true parasites, deriving their subsistence from the animal upon which they are found, such as the Pycnogonoids and Cyami, and those which are merely sessile upon the animal, and derive no nourishment or other benefit from it which might not equally well be furnished by an inanimate object, such as the various cirripedes.

VIENNA

I. R. Geological Institute, Jan. 21.—"Fossil Remains of Sirenoidæ found in the Venetian Territory," by Ach. Barone de Zigno. Besides the ribs and other bones of Halitherium which had been discovered many years ago in the upper tertiary beds of the Venetian Alps, the author succeeded in gathering a very rich collection of different species of Sirenoidæ in the lower tertiary beds (with Serpula spirulæa) of the Monte Zuello, near Montecchio, and in the glauconitic limestone of the basin of Belluno. The glauconitic strata of this basin had been taken till now for Eocene; but fossils found therein by Jaramelli —as *Clypeaster placenta* Des., *Scutella*, *Subrotunda* Lam, &c. —prove that they are of Miocene age.—"On the Eruptive Rocks of Styria," by R. von Drasche. The author gives an accurate petrographical analysis of the different eruptive rocks of Southern Styria, which by former observers had been taken for older porphyries, but which M. Stur has proved to be of tertiary age. They are andesites and trachytes. Some of these rocks resemble indeed very much older porphyries, and prove again the difficulty of discerning by mere petrographical or chemical properties eruptive rocks of different geological age.—A. Redlenbacher presented a memoir on the Cephalopods of the Gosau-strata of the Alps. Since the last publications on this matter by Fr. von Hauer, the number of species in our collections has more than doubled. Only eight of them are identical with species out of non-Alpine cretaceous strata, and they belong all to Senonian beds.

Feb. 18.—M. Tschermak gave an accurate description of the slates, quartzites, and limestones, along a section through the so-called Graywacke Zone of the North-eastern Alps, in the vicinity of Reichenau and the Semmering mountain. These rocks had been thought to belong to the Silurian formation, but in the opinion of M. Tschermak part of them were of a still older age. The study of the oldest sedimentary slates and other rocks of the Alps, promises, he thinks, valuable information about the genesis of the crystalline slates.—M. Fr. Foetterle "On the copper and iron ores of Ferriere in the province of Piacenza, in Italy." The valley of the Nure, extending from Piacenza in a south-west direction into the central part of the Appenines, in the upper part of its course is bounded by high mountain ranges, which consist of grey sandstones, alternating with bituminous slates and marls. They belong to the so-called macigno (Vienna and Carpathian sandstone) and are probably of Eocene age. In the highest parts of the valley, in the environs of Boli and Ferriere, the macigno is traversed by numerous masses and dykes of an eruptive rock which is partly gabbro, consisting of large crystals of amphibol and feldspar, and partly serpentine. These eruptive rocks are of a more recent age than the macigno, which is very much altered by contact with them. Partly in the eruptive rocks and partly in the adjacent altered macigno are to be found masses of copper- and iron-pyrites, and of magnetic iron ores; they form boulders of some size, but nowhere regular layers or veins. The mines which have been opened to gain these ores, M Foetterle thinks, promise no great success.—O. Feistmantel on the relations between the carboniferous and the Permian formations in Bohemia. In some of the Bohemian coal-basins, *e.g.* that of Radowenz at the foot of the Riesengebirge, in the north-western environs of Prague, in the basin of Pilsen, &c., two layers of coal are known, both accompanied by vegetable remains of a pure carboniferous type; but the strata between these layers contain remains of fishes, as Xenacanthus, Acanthodes, Palæoniscus, &c., which belong to the Permian fauna. The author concludes that the upper coal layers of the Bohemian coal-basins belong to the Permian formation, and the lower only to the carboniferous formation, and that both formations are most intimately allied by their identical flora.

DIARY

THURSDAY, APRIL 17.

LINNEAN SOCIETY, at 8.—Burmese *Orchideæ*, from the Rev. C. P. Parish: Prof Reichenbach.—Perigynium of *Carex*: Prof. McNab.

CHEMICAL SOCIETY, at 8.—On Heat produced by Chemical Action: Dr. Debus, F.R.S

NUMISMATIC SOCIETY, at 7.

ZOOLOGICAL SOCIETY, at 4.

SUNDAY, APRIL 20.

SUNDAY LECTURE SOCIETY, at 4.—The Theory of Wind Instruments: Dr. W. H. Stone.

MONDAY, APRIL 21.

LONDON INSTITUTION, at 4.—Elementary Botany: Prof. Bentley.

GEOLOGISTS' ASSOCIATION, at 8 —Visit to Museum of Practical Geology.

TUESDAY, APRIL 22.

ROYAL INSTITUTION, at 3 —Music of the Drama: Mr. Dannreuther.

INSTITUTION OF CIVIL ENGINEERS, at 8.—Discussion on Mr. Head's paper on Steam Locomotion on Common Roads —On the Delta of the Danube, and the Provisional Works erected at the Sulina Mouth.—Sir C. A. Hartley.

ANTHROPOLOGICAL SOCIETY, at 8.—Religious Beliefs of Ojibois or Santeux Indians resident in Manitoba and at Lake Winnepeg: A. P. Reid, M.D.—Danish aspect of the Nomenclature of Cleveland: Rev. J. C. Atkinson.—Rock Inscriptions in Brazil: John Whitfield.

WEDNESDAY, APRIL 23.

LONDON INSTITUTION, at 7.—On some Phenomena connected with Magnetism: W. F. Barrett.

SOCIETY OF ARTS, at 8.—On Silk-Worm Grain: M. Alfred Roland.

ARCHÆOLOGICAL ASSOCIATION, at 8.

SOCIETY OF ANTIQUARIES, at 8.30.—Anniversary.

ROYAL SOCIETY OF LITERATURE, at 8 30.—The Serio Comic Satirical Poetry of the 18th and 19th centuries: Sir Patrick de Colquhoun, Q.C., LL.D.

SOCIETY OF TELEGRAPH ENGINEERS, at 7.30.—On the Block System of Working Railways: W. H. Preece and Capt. Mallock.

THURSDAY, APRIL 24.

ROYAL INSTITUTION, at 3.—Light: Prof. Tyndall.

ROYAL SOCIETY, at 8.30.

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