differs in several points. I propose to refer the fossils to a species with the name of *Hipposyus formosus*. Prof. Leidy further remarked that he had recently the opportunity of examining the tooth described by Prof. Marsh under the name of *Palæosyops minor*. The tooth evidently belongs to the curious pachyderm with the beaver-like incisors named *Trogosus castoridens*. On observing the molar tooth, which is not worn away like those in the jaw specimen upon which the latter was named, it at once called to mind, the tooth which had been described under the name of *Anchippodus riparius*. On comparison, it would appear as if the specimens referred to *Palæosyops minor* and *Trogosus castoridens*, really belong to the same genus and species. The tooth of *Anchippodus ripparius* was obtained from a tertiary formation, Miocene or Eocene, in Monmouth Co., N.J. If the determination is correct, it would go to show that the Bridger Tertiary formation of Wyoming was contemporaneous with the Tertiary deposit of Monmouth Co., N.J. Prof. Cope stated that the largest mammal of the Eocene formations adjoining those of Wyoming, *i.e.* of the Wahsatch group of Hayden, was the *Bathmodon radians*, Cope, of about the size of Rhinoceros. It was an odd-toed ungulate, with peculiar dental characters. The incisors were well developed above and below, as in the tapir, but the dental series was little interrupted. The crowns of the upper molars were all wider than long, and presented mixed characters. On the outer margin one only of the usual crescents of ruminants was present, but a tubercle represented the anterior one. The one which was present was directed very obliquely inwards. Inner crescents were represented by two angles, the posterior forming the inner angular margin of a flat table, the anterior a mere cingulum at its interior base. The arrangement of these parts was stated to be of interest in connection with the relation ships between the types of hoofed animals. The single outer crescent was a ruminant indication, while the inner table resembled the interior part of the crown of *Titanotherium*. It differed, however, in its early union with the outer margin, its edge being thus possibly homologous with the posterior transverse crest in *Rhinoceros*. The premolars had two or three lobes with crescentic section arranged transversely. He regarded the genus as allied to *Chalicotherium*. He stated that the mammalian fauna of Wyoming and Utah more nearly resembled that of the Paris Basin than any yet discovered in our country, and that it had been discovered to contain a still greater number of generalised mammalian forms. One of the most marked of these was the genus just described by Dr. Leidy.

PARIS

Academy of Sciences, September 30.—M. Chevreul, president.—The following members of the International Committee on the Metric System were present at the meeting :—MM. Stankart and Bosscha, for the Low Countries ; Mr. Chisholm, for England ; General Ibanez, Spain; MM. Lang and Herr, Austria. The following papers were read :—"On the demonstration of the formula which represents the elementary action of two currents," by M. J. Bertrand, a long mathematical paper on Ampère's law of electrodynamical attractions ; "On the immediate determination by the principle of correspondence of the number of points of intersection of two curves of any order which meet at a finite distance," by M. Chasles.—Next came a note on the stability of colours on stuffs in general, and on silk in particular, by M. Chevreul. The author refers to a paper he read before the Academy twelve years back, when he drew attention to the unstability of many of the aniline colours then recently introduced. He now again calls attention to these colours, and considers that the use of them cannot fail to have a disastrous effect on French commerce and industry.—A paper by Father Secchi followed, entitled, "Solar Spectroscopic Researches." The author calls attention to the following extract from a letter to Herr Schellen, written by Mr. Young, of Dartmouth College, U.S. A. Mr. Young was stationed on Mount Sherman, 8,300 feet above sea level, and used a telescope of 9·4 inches aperture. He says, "The spectrum of the sun, although not entirely reversed at the border of the disc, became continuous, as Father Secchi has seen in Italy. When the air is calm the height of the region where this occurs is not greater than 1". The lines rays of the chromosphere were remarkably augmented in number. H_1 and H_2 were seen reversed, as was *h* and the other hydrogen lines. In the spectrum of each spot the lines of hydrogen were reversed in a region slightly more extended than the penumbra ; this has been verified for at least twenty different spots." Father Secchi states that these observations confirm his own made at Rome in 1869.—M. Bertrand then presented the Academy with a posthumous work of M. Duhamel, entitled "An Essay on the application of scientific methods to the moral man," upon which he made some remarks. He was followed by M. Max Marie's concluding paper "On the theory of the residues of double integrals." Next came M. M. A. Rabuteau and F. Papillon's "Researches on the Physiological Action and Antifermentable properties of Sodic Silicate." The authors have added various quantities of this body to different kinds of fermentable matter and find a quantity of two grammes to completely stop all fermentation of whatever kind. Its action is exactly analogous to that of borax but more energetic. Two grammes of the latter injected into the veins of a dog produced no effect whilst one gramme of the silicate produced violent purging and vomiting and ultimately death after an interval of nine days.—On the effect of vegetable parasites in altering bread by M. M. F. Rochard and Ch. Legros was referred to the commission appointed to examine the *Oidium aurantiacum*. M. Bertrand then presented a note "On the movement of the Planets around the Sun according to the Electrodynamic Law of Weber," by M. F. Tisserand. M. Yvon Villarceau presented a note by M. Stephan on the "Elements and Ephemerides of Planet 122. M. Yvon Villarceau remarked that M. Stephan had also calculated the orbit of 121, and he then presented a note by M. R. Luther, on an "Observation of the Planet 95, Arethusa, made at the Observatory of Bilk-Düsseldorff," which was followed by a note of M. Trève, "On Magnetism."—M. Milne-Edwards then presented a note by M. N. Joly, entitled, "Observations on the Metamorphoses of Osseous Fish in general, and particularly on those of a small Chinese fish of the genus Macropoda, recently introduced into France."—This was followed by a paper by M. H. Sicard, "On the Connection which exists between the Nervous and Muscular Systems in the Helices."—And then came a note by M. Lichtenstein, "On a Process for the Destruction of *Phylloxera*," by the burying and subsequent destruction of the young shoots. Papers on the same subjects were received from MM. A. Rainaud, Peyrat, and Louvet, and were sent to the Phylloxera Commission.

PAMPHLETS RECEIVED.

ENGLISH.—The Philosophy of Theism: J. Croll.—Quarterly German Magazine, No 2.—Proceedings of the Bath Natural History Society and Antiquarian Field Club, Vol. ii. No. 3.—Proceedings of the Liverpool Naturalists' Field Club, 1871-72.—The Geology of the country around Liverpool: G. H. Morton.—Notes for my Students in Magnetism: W. J. Wilson.—Annual Report of Committee for amending the law with respect to the property of married women.—Journal of Mental Science, October.—Quarterly Journal of Science, No. 34.—Heywood's School Atlas of Twelve Maps.—Pyrology, or Fire Analysis: Captain W. A. Ross.—Journal of the Statistical Society, September.

AMERICAN AND COLONIAL.—Canadian Naturalist, Vol. vi. No. 4.—Popular Science Monthly, October.—Preliminary Description of New Tertiary Mammals: O. C. Marsh.—Notice of some new Tertiary and Post-tertiary Birds: O. C. Marsh.—Proceedings of the Academy of Natural Sciences, Philadelphia, January—April 1872.—Washington Observations for 1870; Appendix II. Report on the Observations of Encke's Comet during its return in 1871: Hall and Harkness.—The Curious History of a Butterfly: S. H Scudder.—Proceedings of the Asiatic Society of Bengal, August.

FORRIGN.—Verhandlungen der k. k. geologischen Reichsanstalt zu Wien, August 30.—Sulla incinerazione dei Cadaveri: G. Polli.—Zeitschrift für Meteorologie, September.—Sur la mesure des sensations physiques: J. Plateau.—La Belgique horticole, July—October.—Om Echinoideernis bygynad: S. Loven.

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