

A New Dicotyline Mammal from the Kansas Pliocene.

THE genus *Platygonus* was described in 1852 by Dr. John L. Leconte, from various fragmentary remains obtained at Galena, Ill. Additional species have since been described by Marsh based upon the still more uncertain evidence offered by the teeth alone. The genus has thus had a very doubtful existence, or has been merged into *Dicotyles*. The recent acquisition by the University of Kansas of several skeletons of a species, which, from the comparison of Leconte's figures, I believe belongs here, enables me to give for the first time satisfactory generic characters. This species, which may be known as *P. leptorhinus* Will., is of about the same size as the type, *P. compressus* Lec., from which it is at once distinguishable by the angle of the jaws, which is shaped as in *Dicotyles*, though not at all inflected. From *P. striatus* Marsh, from the Pliocene of Nebraska, the absence of striation of the second premolar tooth (upon which the species was based) will separate it. A figure of the restored skeleton, with a full description, will shortly be given. For the present, the following characters will be of interest: The dentition is like that of *Dicotyles*, except that the incisors are much smaller, and the third lower one is wholly wanting. The molars show a partial confluence of the cusps, but the difference from *Dicotyles* in this respect is not striking. The most remarkable character which the genus shows is the entire absence of the outer toes on both hind and fore feet. They are represented by short splints, which do not reach to the middle of the conjoined metapodials. There are other characteristic differences in the carpus and tarsus, which will be best shown by the aid of figures. The animals were decidedly stouter in form than the living peccaries and stood about thirty inches in height. The last premolar of the milk series had three series of cusps.

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BOOK-REVIEWS.

Neudrucke von Schriften und Karten über Meteorologie und Erdmagnetismus. Herausgegeben von Prof. Dr. G. HELLMANN.

No. 1. *L. Reynman, Wetterbuechlein. Von wahrer Erkenntniss des Wetters*, 1510. Facsimiledruck mit einer Einleitung. Berlin, A. Ascher & Co., 1893, 4to, 42, 14 p. 6 marks (\$1.50).

No. 2. *Blaise Pascal. Récit de la Grande Expérience de l'Equilibre des Liqueurs.* Paris, 1648. Facsimiledruck mit einer Einleitung. Berlin, A. Ascher & Co., 1893, 4to, 10, 20 p. 3 marks (75c.).

IN view of the growing interest that is being shown those infant twin sisters of astronomy—meteorology and terrestrial magnetism—it may not be amiss to call the attention of the readers of *Science* to the above-named series of excellent reprints in facsimile of rare old books and charts that have been epoch-making in the subjects named. Additional importance is to be attached to these reprints in that they are edited by a scholar whose keen critical ability and power for careful, painstaking research have put him in the front rank of the meteorologists and bibliographers of the day.

With the coöperation of the German Meteorological Society and its Berlin branch, the above two numbers have been issued and others promised, such as Luke Howard's "On the Modifications of Clouds, 1803," in which we have the first attempted classification of cloud formations; "Halley's Isogonic Chart of 1700"—the first of the kind; "Humboldt's Isotherms, 1817"—the earliest drawn; and others. As the chief object in view is to

make these classic works, the originals of which are well-nigh unobtainable and very expensive, accessible to every one interested, they are published at the low price named above. Professor Hellman and his coöperators have thus earned for themselves the highest praise and deserve the heartiest coöperation.

No. 1, a most elegant volume, is a facsimile reprint (preceded by a careful and critical discussion by Professor Hellmann) of the oldest meteorological book printed in German. It may, thus, apparently, have more of a local interest. The fact, however, that it ran through seventeen editions in thirty-four years, the earliest being in 1505, of which no trace can now be found, and that it was almost literally translated in "The Boke of Knowledge of Thynges Vnknown, apperteyning to Astronomy, with certain necessarye Rules," published in London in 1585, already enhances the interest in the book. It was besides incorporated in many other works. It was the first attempt at emancipation from the astrological superstitions of the day. In their stead the author strove to substitute simple rules (many in rhyme) based upon natural laws and phenomena. The book thus possesses an interest not only to the professional meteorologist, but also to the bibliographer, the historian, the student of folk-lore, in fact, to all who are interested in the gradual growth of the human mind and in the throwing off of the shackles imposed by the Middle Ages. Of the seventeen editions, Professor Hellmann, through correspondence with one hundred and fifteen libraries, could barely trace more than three dozen copies. The reprint has been made from the second edition of 1510, the only copy of which being in the possession of Professor Hellmann. Of Reynman little could be learned except that he lived in classic Nuremberg, about 1520, and was thus a contemporary of such illustrious men as Georg Hartmann, Albrecht Dürer, and a host of eminent scientists. In writing his book he drew largely upon a large astrological treatise by Guido Bonatti, an Italian astrologer of the thirteenth century, which was published in 1491, and upon "Oposculum repertorii prognosticum in mutationes æris, 1485," by Firmin de Belleval, a Frenchman, otherwise unknown.

No. 2. This volume will surely interest every scientist. It is the reprint of a work of the greatest rarity, as but three copies, two in Paris and one in Breslau, could be found, the one in Breslau being used in the reproduction. In this volume is given the first experimental proof that the pressure of atmospheric air is the cause of the rising of mercury (or any other liquid) in an inverted tube previously exhausted of air and placed in a trough of mercury—the memorable experiment of Torricelli (or rather one of his pupils), in 1643. Up to the time of the publication of this interesting tract, the universal belief was that the cause was to be sought in nature's *horror vacui*. The experiment was most carefully and scrupulously carried out by Perier, a brother-in-law of Pascal. The first eight pages of the facsimile reprint form the letter of instructions sent to Perier by Pascal, Nov. 15, 1647. On Sept. 22, 1648, Pascal received the happy news from Perier of the successful outcome of the experiments. (See p. 17-20). Perier filled two tubes with mercury and saw that their readings agreed at Clermont. He then emptied one and carried it to the top of the Puy de Dome (3550 feet above Clermont) and after filling it again with mercury, found the reading less. After repeating the experiment at a station half-way down, he descended to Clermont and again filled his tube, but now found that it read the same as the one previously left there. Hence, ascent in the air or decrease in height of superincumbent atmosphere meant a fall in the barometric reading, or decrease in pressure. The conclusion was at once evident