

accompanying a preliminary note on diameters of cubics, by J. J. Walker, F.R.S.

PARIS.

**Academy of Sciences, June 13.**—M. Janssen in the chair. —On the life and labours of M. Laguerre, Member of the Section for Geometry, by M. Poincaré. A brief sketch is given of the important discoveries made, especially in pure geometry, by this distinguished mathematician, who was born at Bar-le-Duc on April 9, 1834, and died there on August 14, 1886. —General method for the determination of the constant of aberration, by M. M. Loewy. By means of the table published in the *Comptes rendus* for May 23, the author has determined the two azimuths relative to the horizontal direction of the terrestrial movement. The solution of this problem affords a good illustration of the easy application of the new method, as well as the high degree of accuracy of which it is capable. —Note on the earthy phosphates, by M. Berthelot. Some practical remarks are offered in connexion with M. Joly's recent communication on the earthy phosphates. While confirming the numerical data of previous thermo-chemical studies, they extend and in some respects modify their application. —Note on the residuums resulting from the action of the acids on the alloys of the metals in association with platina, by M. H. Debray. In a previous communication it was shown that the common metals, such as tin, zinc, lead, alloyed with a small quantity of the metals of platina, when heated with an acid capable of dissolving the common metal yield either the metal of platina in the crystalline state, or perfectly distinct alloys, or, lastly, residuums containing a considerable portion of water and oxygen. Here it is shown that these residuums even contain nitrogen when the acid employed is nitric acid. —Figures in relief representing the successive attitudes of a pigeon on the wing; disposition of these figures on a zoetrope, by M. Marey. By the method already described and applied to other birds, the author here represents the flight of a pigeon in eleven successive attitudes taken at equidistant phases in a single revolution of the wing. The zoetrope on which these phases are reproduced is an instrument derived from Plateau's phenakistiscope, which reflects the continuous flight of a bird. The large number of the images and the slow rotation of the instrument reproduce the apparent movements so gradually that the eye is easily able to follow them in all their shifting phases. The bronze figures are painted on a white ground, the illusion being completed by appropriate tints imparted to the bill, feet, and eyes. —"The Pygmies of the Ancients in the light of Modern Science," by M. A. de Quatrefages. On presenting to the Academy the work bearing the above title, the author remarks that, although now found only in scattered groups everywhere oppressed or encroached upon by larger and stronger races, the dwarf Negroite peoples existed in compact bodies forming the bulk of the population in many parts of Africa, Southern Asia, and the Eastern Archipelago. The Akkas, discovered by Schweinfurth south of the Monbuttu country, formerly reached as far north as the parallel of Khartoum, and were known by this name to the ancient Egyptians, Mariette having found it inscribed under a pygmy sculptured on a monument dating from the old empire. The Negroites of Malaysia and Melanesia, characterized by their low stature and a relative degree of trachycephaly, are quite distinct from the Papuans of the same region, and this distinction is now generally recognized by anthropologists. The Asiatic pygmies described by the ancients are represented by these eastern Negroites, just as the African pygmies of Herodotus and Pliny were the ancestors of the Negrilloes still surviving in many parts of Africa. In stature the modern pygmies range from 1'507 (various tribes in the Malay Peninsula) down to 1'300 metre (the Batwas recently discovered by Dr. Wolf in the Congo Basin). —Observations of the Borrelly planet made at the Observatory of Algiers, by M. Trépied. —Observations of the new planet, No. 267, discovered at Nice on May 27, by M. Charlois. —On a new form of electrometer, by M. J. Carpentier. The apparatus here described has been prepared especially with a view to industrial appliances. It is distinguished by its exceptional qualities of aperiodicity, by which its readings are rendered perfectly sure and rapid. —Researches on the trimetallic phosphates, by M. A. Joly. Here are studied the sodico-strontianic and sodico-barytic phosphates and arseniates, which are specially interesting owing to the readiness with which they are formed in the crystalline state with a considerable liberation of heat, and under conditions analogous to those yielding the ammoniacomagnesian phosphate. —On the metallic vanadates, by M. A.

Diite. Having already prepared a number of vanadates by the dry process, the author here shows that many metallic vanadates, such as those of magnesia, lime, nickel, cobalt, zinc, copper, lead, and silver, may also be produced by the wet process. The crystallized vanadates thus obtained present, like the others, compositions analogous to those of the alkaline vanadates. —On the hydrochlorates of chlorides, by M. Engel. This paper deals more especially with the hydrochlorate of perchloride of iron. —On the composition of different butters, by M. E. Duclaux. The experiments made by the author with butters from various parts of France show that, contrary to the generally accepted opinion, the quality of this article does not depend so much on the method of preparation as on the breed of cattle and their food, the character of the pastures—that is to say, the geological constitution of the soil—the influence of the seasons, the age of the milk, &c.

#### BOOKS, PAMPHLETS, and SERIALS RECEIVED.

Journal of the Chemical Society, June (Gurney and Jackson).—Proceedings of the Society for Psychical Research, May (Trübner).—Journal of the Royal Microscopical Society, June (Williams and Norgate).—Bulletin de la Société Impériale des Naturalistes de Moscou, No. 2 (Moscou).—Beiblätter zu den Annalen der Physik und Chemie, 1887, No. 5 (Barth, Leipzig).—Records of the Geological Survey of India, vol. xx, Part 2.—The True Sources of the Mississippi: P. Giles.—A Century of Electricity: T. C. Mendenhall (Macmillan).—Atlas de la Description Physique de la République Argentine. Deux. Section, Mammifères: Dr. H. Burmeister and E. Daireaux (Buenos Aires).—Metal Plate Work: C. T. Millis (Spon).—Animal Biology: C. L. Morgan (Livingtons).—My Hundred Swiss Flowers: M. A. Pratten (Allen).—Dinocerata, an Extinct Order of Gigantic Mammals: Prof. O. C. Marsh (Washington).—Introductory Text-book of Physical Geography, 12th Edition: D. Page (Blackwood).—On Light (NATURE Series): Prof. G. G. Stokes (Macmillan).—Manchester Microscopical Society, Transactions and Annual Report, 1886.—Geodätische Arbeiten, v. Heft; Vandsstandsobservationer, iv. Heft (Kristiania).—The Nature of Fever: Dr. D. MacAlister (Macmillan).—Proceedings of the American Academy of Arts and Sciences, New Series, vol. xiv., Part 1 (Boston).—Natural History Transactions of Northumberland, Durham, and Newcastle-upon-Tyne, vol. ix., Part 1 (Williams and Norgate).—Bulletin de la Société Impériale des Naturalistes de Moscou, 1886, No. 3 (Moscou).

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