

Among the more important memoirs may be mentioned the following:—On historical incidents and traditions of the Maoris, Part II.—Contributions to a better knowledge of the Maori race, Part IV., and on the fine perception of colour of the ancient Maori, by W. Colenso.—On the causes leading to the extinction of the Maoris, by Dr. A. K. Newman.—Several memoirs on the mollusca of New Zealand, by Prof. Hutton.—On New Zealand crustacea, by C. Chilton.—On the skeleton of *Notornis mantelli*, by Prof. Parker.—On New Zealand shells and cephalopoda, by T. W. Kirk.—On the Coccidæ of New Zealand, by W. M. Maskell.—On New Zealand crustacea, by G. M. Thomson.—On new Orthoptera and Coleoptera, by W. Colenso.—On the freshwater algae of New Zealand, by W. Spencer (a very imperfect paper).—On additions to the flora, by T. F. Cheeseman.—On new species of plants from New Zealand forests, by W. Colenso.—On the Alpine flora of New Zealand, by John Buchanan.—On the New Zealand olives, and on recent additions to the flora, by T. Kirk.—On a deposit of moa bones (probably the oldest yet found) near Motanau, North Canterbury, by A. McKay.—Notes on the mineralogy of New Zealand, by S. Herbert Cox.

*Berichte über die Verhandlungen der Naturforschenden Gesellschaft zu Freiburg, I.B.* Band viii. Heft 1, 1882.—On some actions of coercive force, by E. Warburg.—Imitation of the phenomena of optically-anomalous crystals by stretched colloids, by F. Klocke.—On the action of unilateral pressure on optically-anomalous crystals of alum, idocrase, and apophyllite, by the same.—Axial images in convergent light in alum, nitrate of lead, pressed gelatine, and quickly-cooled glass, by the same.—On the motion of glaciers, by K. R. Koch and Fr. Klocke (second paper).—On the classification of surfaces according to the displaceability of their geodetic triangles, by H. v. Mangoldt.—On the connection between viscosity and density in fluid, especially gaseous fluid substances, by E. Warburg and L. v. Babs.—On a method of testing micrometer-screws, by K. R. Koch.

*Schriften der Naturforschenden Gesellschaft in Danzig*, vol. v. Heft 3, 1882.—Pagan remains found in the Weichsel-Nogal delta, by Dr. Marshall.—Communications on amber, by O. Helm.—A case of duplication of the allantois and the external genitals, by O. Meyer.—Proceedings of the West Prussian Botanical-Zoological Society; fourth meeting at Elbing in June, 1881.—On the hygienic significance of drinking water and rational principles for its examination and estimation, by M. Barth.—On Cenomanian petrefactions from the diluvium of the environs of Danzig, by J. Kiesow.—Telegraphic determination of longitude between Danzig and Königsberg, by E. Kayser.

SOCIETIES AND ACADEMIES

PARIS

Academy of Sciences, October 2.—M. Blanchard in the chair.—Reference was made by M. Dumas to the death of Friedrich Wöhler (who was a Foreign Associate).—M. de Candolle presented a work on the origin of cultivated plants. It treats of 247 species; and of all, except three (viz. two species of *Cucurbita* and the kidney bean), it is possible to say whether they are from the old or the new world. Of 49 species cultivated for more than 4000 years, six or seven are extinct or in course of extinction.—Transit of Venus over the sun, by M. Dumas. The last of the eight missions, that to Florida, under Col. Perrier, left Havre on September 30. M. Dumas gives the complete list. The navy figures prominently. There are three members of the Academy, MM. d'Abbadie and Tisserand, and Col. Perrier; also a nephew of Arago. The eight destinations are: Port-au-Prince, Mexico, Martinique, Florida, Santa-Cruz, Chili, Chubut, and Rio-Negro. Each station will have two equatorial observatories carefully tested. The members have all practised at the Observatory with artificial transits. Most of the missions will use photography. The railway and steamboat companies have given great facilities in transport.—On the shock of imperfectly electric bodies, by M. Resal.—Typographic reproduction of photographs; process of M. Ch. Petit, by M. Marey. Two samples of the process (which is named *similigravure*, but is not described), are given.—Optical communications between Mauritius and Reunion, by Mr. Adams.—The coercitive force of steel rendered permanent by compression, by M. Clémandot. He attributes the effect to the more absolute homogeneity produced by pressure and cooling under pressure. The steel submitted to compression is *soft*, and may be filed, bored, &c.—Researches on the action of the intermolecular ether

in the propagation of light, by M. De Klercker. He believes he has, by a purely physical method, established a new theory of the action.—On the treatment of phylloxerised vines with coal tar, *à propos* of a recent communication of M. Max Cernu, by M. Balbiani.—On the employment of heavy oils of coal in treatment against the winter egg of phylloxera, by M. De Lafitte.—A telegram from Munich (October 2) announced that the experimental transmission of force by an ordinary telegraph wire, between Miesbach and Munich (57 km.), by M. Deprez' method, had fully succeeded. Another telegram (September 26) was received from the Emperor of Brazil about the comet. The presence of sodium and carbon was noted.—Observations of the comets Barnard and Common (1882), at the Lyons Observatory, by M. André.—On a class of uniform functions of two independent variables, by M. Piccard.—Hydrodiapasons, by M. Decharme. One of these is formed of a brass tube of elongated U shape, with a nozzle screwed into the curved part and conducting town water. The upper part of each branch is bent round, so that the free ends are closely opposed. To these ends disks or other pieces may be attached with screws. On passage of the water, a regular vibratory motion occurs, with sound; by attraction if the branch-nozzles have thick edges, by repulsion, if they have thin. The experiment is better if the branches are put in water. The feeling when one touches the instrument is like that of shocks from a weak induction coil.—On the nature of vibratory motions which accompany the propagation of flame in combustible gaseous mixtures, by MM. Mallard and Le Chatelier. They have studied, with the help of photography, the period of accelerated and very irregular velocity (accompanied by sound), which follows a (first) period of slower, silent, and regular propagation, in a tube closed at one end, and having its combustible gaseous contents (bioxide of nitrogen and sulphide of carbon) lit at the other. A vibratory movement is indicated; the amplitude increasing as the last third of the tube's length is neared (where is one of the ventral segments of vibration). A mean pressure of at least 5 atm. is produced for a few tenths of a second. The mean velocity of propagation is accelerated as the amplitude and rapidity of the vibrations increase.—Action of anhydrous chloride of aluminium on the acetone, by M. Louise.—On the secretory epithelium of the kidney of batrachians, by M. Bouillot.—Cause of the rot of grapes in America, by M. Prillieux. The rot is due to penetration of *Peronospora*, not to *Phoma uvicola*, which is merely developed on the grapes already killed.—M. Daubrée sketched the work of a Committee which has reported to the Minister of Public Works on the means of preventing explosions of fire-damp.—M. Daubrée presented a catalogue of the collection of meteorites of the Museum of Natural History on July 1, 1882, and noted recent acquisitions, &c.

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