

continued to live. Under these circumstances the small sessile glands of *Drosera* stained deeply, showing that they became active in the presence of proteid material. Plants similarly treated with gentian-violet stained red where the glands were active, violet where they were only reflexly stimulated. The paper was illustrated by a number of lantern-slides and microscopic preparations.—Dr. C. G. Knott gave a summary of two papers by Mr. J. C. Beattie. The first was on the relation between the Hall effect and thermo-electricity in bismuth and in various alloys. That there was a connection was established, but what the precise nature of that relation was could not be determined till more definite knowledge of the Hall effect in alloys and with different temperatures, was arrived at. The second paper was on the curves of magnetisation for films of iron, cobalt, and nickel. The films were deposited on platinised glass and oscillated in the magnetic field. The results agreed with those already obtained for these metals in a solid condition.

PARIS.

Academy of Sciences, July 6.—M. A. Cornu in the chair.—The Secretary announced that the Institute would be able to award the Jean Jacques Berger Prize in 1897; the prize will be at the disposal of the Academy of Sciences in 1899.—Remarks by M. Albert Goudry on presenting a work on Philosophical Paleontology.—General laws of uniform flow in channels of large section, by M. J. Boussinesq.—Researches on tungsten, by M. H. Moissan. The pure metal is readily obtained by the reduction of tungstic acid with carbon in the electric furnace. With a large excess of carbon the carbide CW_2 is formed, which, in the fused state, readily dissolves more carbon, graphite crystallising out on cooling. Pure tungsten can be readily filed and forged, it welds easily, has no action upon a magnetic needle, and has a melting point higher than chromium and molybdenum.—On the solubility of carbon in rhodium, iridium and palladium, by the same. These three metals dissolve carbon with ease at the temperature of the electric furnace, and give it on solidifying in the form of graphite. No combination to form a carbide appears to take place.—Physiological action of high frequency currents; practical means for their continuous production, by M. A. d'Arsonval. When animals are placed within a solenoid traversed by currents of high frequency, the respiratory changes go on more rapidly. This was shown very simply by measuring the loss of weight in a given time.—Therapeutic effects of high frequency currents, by M. A. d'Arsonval. Since these currents have been found to cause a large increase in the rate of production of carbon dioxide in the body, it was thought that the application of such currents might give relief in diseases such as diabetes, gout and rheumatism, in which the rate of combustion is reduced. In two cases of diabetes the treatment produced marked relief.—On five photographs of the region round η -Argus, by Mr. David Gill.—Verification of Van der Waals's law of corresponding states, by M. E. H. Amagat.—Mr. Christie was elected Corresponding Member in the Section of Astronomy, in the place of Mr. Hind.—On a new capillary theory, by M. Marcellin Langlois.—A sealed note, by M. D. Loiseau, was opened: On some properties of raffinose, serving to estimate this substance in sugars.—On ordinary differential equations of the first order, by M. A. Korkine.—On the local attractions observed in Eastern Europe, by M. Venukoff. An account of the deviation of the pendulum in the neighbourhood of mountains in Bulgaria and in the Crimea.—On the refraction and diffraction of the X-rays, by M. Gouy. For the substances examined, the index of refraction, if not exactly unity, differs from it by a quantity less than the errors of experiment ($\cdot 000001$). As regards diffraction, none could be established with certainty, and the wave-length must be smaller than $\cdot 005 \mu$, or $1/100$ of the wave-length for green light.—Composition of pendular movements, by MM. Jean and Louis Lecarme.—Comparative experiments on the pitch of cylindrical tubes vibrating transversely, by M. C. Decharme.—Action of zinc on the photographic plate, by M. R. Colson. The action has been traced to the vapour of zinc; it is most energetic after the surface has been cleaned with emery paper, but falls off as the surface oxidises. The practical conclusion is drawn that metallic zinc should not be used in the construction of the camera or dark box.—Action of nitrogen peroxide upon antimony trichloride, by M. V. Thomas. There appears to be no true compound formed, but only a solution of the gas in the trichloride.—The effect of a high temperature upon some sulphides, by M. A. Mourlot. In the electric

furnace the amorphous sulphides of lead, antimony, zinc and cadmium are converted into galena, stibine, wurtzite, and greenockite respectively. The antimony sulphide gave some metallic antimony, but no trace of a sub-sulphide.—On two isomers of anethol (propenylanisol), by M. C. Moureu.—Action of ethoxalyl chloride upon naphthalene in presence of aluminium chloride, by M. L. Rousset. Two naphthylglyoxylic acids are obtained, the oximes of which on distilling *in vacuo* give (α) and (β)-naphthonitriles.—On amorphous greenockite of Laurium, by M. Christomanos.—Experimental researches on the effects of intravenous injections of saline solutions. Determination of their value in therapeutics, by MM. Bosc and Vedel.—Cutaneous evaporation in the rabbit; action of pilocarpine, by M. Lecerle.—On some points in the histology of the muscles of the Cirrhipedes, by M. A. Gruvel.—On an accidental parasite in man, belonging to the order of the *Thysanoures*, by MM. Frêche and Beille.—Influence of the composition of the water of lakes upon the formation of sublacustrine ravines, by M. A. Delebecque.—On a new sounding machine; portable apparatus with steel wire, by M. E. Belloc.

BOOKS RECEIVED.

BOOKS.—Year-Book of the U.S. Department of Agriculture, 1895 (Washington).—An Index to the Genera and Species of the Foraminifera: C. D. Sherbern, Part 2 (Washington, Smithsonian Institution).—Thirteenth Annual Report of the Bureau of Ethnology, 1891-92 (Washington).—Aus den Alpen: R. von Lendenfeld, 2 Vols. (Wien, Tempsky).—Report of the Chief of the Weather Bureau, 1894 (Washington).—Elementary Practical Chemistry, &c.: Prof. F. Clowes and J. B. Coleman (Churchill).—An Inquiry into the Alleged Liability of Wood Charcoal to Spontaneous Combustion, 3rd edition (A. Gardner).—Flora der Ostfriesischen Inseln: Dr. F. Buchenau (Leipzig, Engelmann).—Grundriss einer Geschichte der Naturwissenschaften: Dr. F. Dannemann, i. Band (Leipzig, Engelmann).—The Collected Mathematical Papers of Arthur Cayley. Vol. x. (Cambridge University Press).—The Official Guide to the Norwich Castle Museum: T. Southwell (Jarrold).—Grundriss einer Exacten Schöpfungsgeschichte: H. Habenchicht (Wien, Hartleben).—A Geographical History of Mammals: R. Lydekker (Cambridge University Press).—Solutions to the Examples in Loney's Plane Trigonometry, Parts 1 and 2 (Cambridge University Press).—Wild Life of Scotland: J. H. Crawford (Macqueen).

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