

with neat solutions of special problems; such subjects as the methods of teaching "Progressions" in Algebra might well afford interesting material for discussion.

THERE are several interesting papers in the *Journal of Botany* for June and July 1898.—A figure is given of the newest addition to our phanerogamic flora, *Stachys alpina*.—Mr. H. N. Dixon adds also a new moss (from Perthshire) to the British flora, *Plageocheilium Millerianum*.—The "Recent Literature on Algæ," by Miss Ethel S. Barton, contributed from month to month, is a useful feature.

SOCIETIES AND ACADEMIES.

PARIS.

Academy of Sciences, July 4.—M. Wolf in the chair.—The Perpetual Secretary announced to the Academy the death of M. Ferdinand Cohn, Correspondant in the Botanical Section.—M. Van Tieghem added a short appreciation of the work of the late Prof. Cohn.—Numerical tables for facilitating the development by interpolation of the disturbance function, by M. O. Callandreaux.—On the elastic equilibrium of a dam of masonry of triangular section, by M. Maurice Lévy.—On the maintenance of the motion of a pendulum without disturbance, by M. G. Lippmann. A series of instantaneous impulses is given to the pendulum, equal, but of contrary signs, the algebraic sum of the disturbance being equal to nothing. If the impulses are imparted as the pendulum swings through its position of equilibrium, each separate disturbance also becomes vanishingly small.—New observations on the Zeeman phenomenon, by MM. Henri Becquerel and H. Deslandres. In a very intense magnetic field (35,000 C.G.S. units) the bands of nitrogen and cyanogen (the "carbon spectrum") show no signs of doubling nor enlargement, although the rays of the air spectrum were, under the same conditions, strongly divided. Most of the rays examined undergo the division into triplets announced by M. Zeeman; certain rays, however ($\lambda = 3788.01$, $\lambda = 3743.45$ in the iron spectrum), split up into five. The distribution of these split-up rays, considered as a function of the wave-length, shows signs of periodicity.—On the decomposition of water by chromous salts, and on the use of these salts for the absorption of oxygen, by M. Berthelot. Solutions of pure chromous chloride, free from all trace of free acid, give no trace of hydrogen gas, even after eleven years. In presence of a trace of hydrochloric acid, a minute quantity of hydrogen is evolved, which becomes very appreciable at 25° C. Hence acid solutions of chromous chloride cannot be used for the removal of oxygen in exact work, except in the case of hydrogen.—On the reaction between hydrogen gas and nitric acid, by M. Berthelot. Hydrogen is not absorbed by pure nitric acid, either in the cold or at 100°, even after twenty hours contact.—Preparation and properties of calcium hydride, by M. Henri Moissan (see p. 257).—On apple orchards on pasture land, by M. Ad. Chatin.—Notice on the life and work of M. Paul Serret, by M. Darboux.—Velocity of propagation of discontinuities in media at rest, by M. Paul Vieille.—The relation of metallic envelopes to the Hertzian oscillations, by M. Edouard Branly. The Hertzian oscillations are completely arrested, even by a very thin metallic envelope, if the latter is hermetically closed.—Mechanism of the discharge by the X-rays, by M. G. Sagnac.—Irreversible isothermal transformations of a mixture. Development of the conditional relation of equilibrium, by M. A. Ponsot.—On blue glass with chromium base, by M. André Duboin. Account of some experiments on the production of blue glass. The three glasses, $4.5\text{SiO}_2 \cdot \text{Al}_2\text{O}_3 \cdot 3\text{BaO}$, $4.5\text{SiO}_2 \cdot \text{Al}_2\text{O}_3 \cdot 1.5\text{CaO} \cdot 1.5\text{BaO}$, and $28\text{SiO}_2 \cdot 9\text{B}_2\text{O}_3 \cdot 16\text{BaO} \cdot 3\text{Al}_2\text{O}_3$, coloured either with potassium bichromate or chromic oxide, give very fine blue glasses.—On copper selenate and its use in the preparation of selenic acid, by M. R. Metzner. Selenium is converted into selenious acid, and this oxidised in solution with chlorine. Copper oxide is added to this liquid, and evaporation gives fine prisms of copper selenate. Pure selenic acid is obtained from this by electrolysis.—Action of hydrogen upon potassium paratungstate, by M. L. A. Hallopeau. At a low temperature a mixture of the blue oxide with the dioxide of tungsten is obtained. At a higher temperature tungsten bronze ($\text{K}_2\text{O} \cdot \text{WO}_3 + \text{WO}_2 \cdot \text{WO}_3$) is formed.—Volumetric analysis in alkaline solution by a ferrous reducing agent, by M. André Job. The reducing liquid is made by adding an acid solution of ferrous ammonium sulphate to an excess of sodium pyrophosphate. The excess of the iron salt

can be exactly determined by standard iron solution. The solution in sodium pyrophosphate is colourless and remains so during the oxidation, and is as energetic in its reducing power as stannous chloride.—Volumetric analysis of a mixture of acid ethyl phosphates and phosphoric acid, by M. J. Cavalier.—On the estimation of phosphoric acid, by M. Henri Lasne. A discussion of the results given by M. Leo Vignon.—On the phenylurethanes of the ethers and nitriles of some oxy-acids, by M. E. Lambling. The urethanes described were the phenylurethanes of ethyl lactate, trichlorolactate, of trichlorolactic nitrile, glycollic ether and nitrile, phenyl glycollic ether and nitrile, and α - and β -ethyl oxybutyrate.—On a new combination of acetylene with cuprous oxchloride, by M. R. Chavastelon. By the action of water upon the compound $\text{Cu}_2\text{Cl}_2 \cdot \text{C}_2\text{H}_2$, previously described, the substance $\text{Cu}_2\text{O} \cdot \text{Cu}_2\text{Cl}_2 \cdot \text{C}_2\text{H}_2$ is obtained.—On ethane-pyrocatechol, by M. Ch. Moureu.—On the elimination of chlorides in rickets, by M. Gchsner de Coninck.—Absorption of liquids by textiles, by M. Leo Vignon. Textiles have a specific absorbing power for each liquid, the order of magnitude of this constant being silk, wool, and cotton.—The hematoma of goitre, by M. E. Grosset. The parallelism between goitre and malaria is shown to be very well marked, and drawings are given of parasitic organisms, hematoma, always present in the blood of recent cases of goitre.—On the functions of the pancreas in the Squalidæ, by M. Emile Yung.—On the development and structure of the larva of some cheilostomatous bryozoa, by M. Louis Calvet.

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