

June 25.—M. A. d'Arsonval in the chair.—A. Lacroix : The transformation of some basic eruptive rocks into amphibolites.—G. Bigourdan : The observations attributed to Prince Louis of Valois; and on the astronomer, Jacques Valois. The observations attributed to Prince Emmanuel of Valois (1596 to 1663) were really due to Jacques Valois (or de Valois), whose life is only known through his correspondence.—L. Maquenne and E. Demoussy : The influence of water and mineral matter on the germination of peas. The presence of traces of mineral matter derived from glass favours the germination of seeds, and if it is required to study the process of germination in distilled water, it is necessary to use a quartz condenser in making the distilled water and to store the water in quartz or platinum vessels. Comparative experiments, germinating peas in quartz and glass vessels, always gave a better development of roots in the glass than in the quartz vessels. The magnitude of the effects observed was unexpected, and it is pointed out that in botanical and physiological experiments attention must always be paid to the possible intervention of soluble products derived from the glass.—A. Gautier : An artificial soil, nearly free from all mineral or organic material, suitable for the study of plant cultures and for the examination of the influence of various chemical manures. The medium proposed is powdered charcoal (*braise de boulanger*) first heated to redness, then boiled with hydrochloric acid, and extracted with distilled water. This may advantageously replace glass powder, cotton, or sand media for botanical cultures. It has been especially useful in studying the effects of traces of fluorides on vegetation.—E. Aries : The specific heats of fluids maintained in the saturated state.—G. Julia : Binary indeterminate conjugated forms remaining invariant by a group of linear substitutions.—W. Sierpinski : An extension of the notion of the density of ensembles.—E. Jablonski : Contribution to the study of the most general case of shock in a system of material points submitted to Newton's law.—E. Belot : Some principles applicable to comparative planetography.—P. Th. Dufour : Experimental researches on the terrestrial tetrahedron and the distribution of land and sea. Globules of liquid paraffin wax are immersed in methyl alcohol of the same density as the paraffin, and carried to a temperature slightly above the melting point of the wax. On allowing to cool slowly, the liquid globule remains perfectly spherical. If the bath is kept in motion, so as to produce a regular solidification, symmetrical tetrahedral globules are obtained, with convex faces and rounded points. The effect of variations in the density of the earth's crust on the form assumed by slow cooling is discussed in connection with these experiments.—A. Leduc : The expansion of argon and neon. Internal pressure in the monatomic gases. The coefficient of expansion of argon between 5.47° C. and 29.07° C. is 0.003664; of neon between 11.95° C. and 31.87° C., 0.003669, with a possible error of 2 in the last figure.—P. Chevenard : An anomaly of cementite in carbon steels, annealed, tempered, or half-tempered.—J. Bougault : A new method of estimating aldehydic sugars. The method is based on the oxidation to the corresponding acid by iodine and sodium carbonate, the iodine used being determined. A small correction is required on account of a secondary reaction.—Ph. Glangaud : The ancient glaciers of the Monts-Dore volcanic massif.—L. Moreau : Radiological researches on the angle of inclination of the human heart. The angle of inclination of the normal human heart is usually given in the treatises on anatomy as between 55° and 60°. One hundred subjects examined by a radiological method gave a figure which, in 74 per

cent. of the cases examined, was between 65° and 78°.—L. G. Seurat : The evolution of *Maupasina Weissi*.—H. Vallee and L. Bazy : The active vaccination of man against tetanus. The liquid injected consisted of a tetanotoxin neutralised with a solution of iodine in potassium iodide. Vaccinated rabbits resisted the effect of a quantity of toxin sufficient to kill 2000 kilograms of living substance. The vaccination treatment is more especially proposed to combat latent tetanus.

BOOKS RECEIVED.

- A Bibliography of Fishes. By B. Dean. Enlarged and edited by C. R. Eastman. Vol. i. Pp. x+718. (New York : American Museum of Natural History.)
Bibliography of the Published Writings of H. Fairfield Osborn for the Years 1877-1915. Second edition, Part i., Classified by Subject. Part ii., Chronologic. Bibliography. Pp. 74. (New York : American Museum of Natural History.)
A Chemical Sign of Life. By S. Tashiro. Pp. ix+142. (Chicago : University of Chicago Press; London : Cambridge University Press.) 1 dollar, or 4s. net.
Manuals of Health. I., Food. By Dr. A. Hill. Pp. 64. (London : S.P.C.K.) 9d.

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