

Societies and Academies.

PARIS.

Academy of Sciences, July 3.—M. Emile Bertin in the chair.—The president announced the death of Prince Albert of Monaco, foreign associate of the Academy.—P. A. Dangeard: The structure of the cell in the Iris. In a recent communication the author has given a detailed description of the plastidome and spherome in the leaves of *Iris germanica*: this is supplemented in the present paper by similar details for the same formations in the tissues, petals, sepals, stamens, ovary and ovules. The plastidome and spherome are independent formations and have an existence as general as the nucleus in the plant cell.—André Blondel: The unsymmetrical electric arc between carbon and metals.—M. Albert Recoura was elected correspondant for the section of Chemistry in the place of the late M. Ernest Solvay.—The Permanent Secretary announced the death of M. Otto Lehmann, correspondant for the section of Mineralogy.—Armand Cahen: Singular solutions of differential equations of the first order.—Miécislas Biernacki: The displacement of the zeros of integral functions by derivation.—R. Jarry-Desloges: Contribution to the study of the surface of planets. The systematic observation of the planetary surfaces, especially of Mars, commenced in 1907 at Revard, have been continued in May and June of this year at Sétif, with the 37 cm. and 26 cm. refractors. The decoloration of certain dark areas in the southern hemisphere of Mars, observed in 1909 at Revard, has been seen again this year.—Jules Bail্লাud and Milles. Bonnet, Clavier, and Lhomme: Distribution of stars in the Paris zone of the astrophotographic catalogue.—Axel Lindh: The absorption spectrum of sulphur for the X-rays. An examination of sulphur compounds grouped according to the valency of the sulphur. As in the case of chlorine previously studied, the limits of the K absorption for sulphur are displaced towards the shortest wave-lengths for the higher valencies.—Albert Portevin: The thermal treatment of cast pieces, and especially of cast projectiles. Thermal treatment produces porosity in the metal.—Roger G. Boussu: The limit of inflammability of the vapours of the alcohol-petrol system and of a triple system containing as base alcohol and petrol.—C. Matignon and M. Fréjacques: The transformation of gypsum into ammonium sulphate. Calcium sulphate was stirred with concentrated ammonium carbonate solution in approximately equimolecular proportions. Equilibrium was reached after five hours, about 96 per cent. being converted into ammonium sulphate.—Albert Granger and Pierre Brémond: The chemical composition of rock, supposed to be kaolin, from Djebel Debar, Algeria. This is formed of halloysite, associated with a hydrated aluminium silicate containing combined sulphuric acid.—Paul Thiéry: The upper Bajocian of Lorraine.—G. Denizot: The last variations of the marine level on the coasts of Basse-Provence.—P. Bugnon: The basifuge acceleration in the hypocotyl.—G. Nicolas: A new host of Phyllosiphon. This parasite was found on *Arum italicum* near Toulouse. This resembles *P. Arisari*, and if not belonging to a different species, constitutes a different biological strain, since although *Arisarum vulgare*, carrying *P. Arisari*, grows in the neighbourhood of *Arum italicum* in Algeria, the latter plant has not been found attacked by the parasite.—

Pierre Lesage: Experiments on the movement of liquids in cell masses.—Jacques de Vilmorin and Cazaubon: The catalase of seeds. The presence of catalase cannot be taken in all species as a proof of the vitality of the seed.—Marc Romieu and Fernand Obaton: Comparative spectroscopic study of the green pigment of the Chetoptera and the chlorophyll of the green alga, *Ulva lactuca*. The chetopterin is regarded as a pigment of extrinsic origin, and is a modified chlorophyll.—Mme. Danysz-Michel and W. Koskowski: Study of some digestive functions in normal pigeons, fed with polished rice or kept without food. Comparative experiments made with pigeons on four different diets: normal diet, no food, polished rice only with and without daily injection of histamine. From the examination of the gastric juice and intestinal contents it is concluded that the observed facts can be explained without assuming the intervention of a vitamin.—J. Athanasiu: Nerve motor energy: electromyograms.—L. Garrelon, D. Santenoise, and R. Thuillant: The action of peptonic shock on the vago-sympathetic nervous system.—P. Wintrebert: The first manifestations of nervous co-ordination in the body movements of *Scylliorhinus canicula*—Pierre Girard: Remarks on a note of M. L. Lopicque on the mechanism of the exchanges between the cell and the surrounding medium.—W. R. Thompson: The theory of the action of entomophagous parasites. Increase in the proportion of hosts carrying parasites in cycle parasitism.—S. Metalnikow: An epizootic disease in the caterpillars of *Galleria mellonella*.—R. Cambier and E. Aubel: The culture of bacteria in a medium of definite chemical composition, with pyruvic acid as a base. The degradation of pyruvic acid. In these cultures the only source of carbon is sodium pyruvate. Three bacilli could be grown on this medium, the pyocyanic bacillus, Flügge's fluorescent bacillus, and the coli bacillus. Acetic, lactic, and glycollic acids were isolated from the cultures.

Official Publications Received.

Records of the Indian Museum. Vol. 24, Part 2, June: Notes on Crustacea Decapoda in the Indian Museum. By Stanley Kemp. XV.: Pontoninae. Pp. 113-288+plates 3-9. (Calcutta: Zoological Survey of India.) 2 rupees.

The Institution of Civil Engineers. Engineering Abstracts prepared from the Current Periodical Literature of Engineering and Applied Science, published outside the United Kingdom. Edited by W. F. Spear. New series, No. 12, July. Pp. 228. (London: The Institution of Civil Engineers.)

Bureau of Education, India. Pamphlet No. 12: Science Teaching in England. By H. Banister. Pp. v+28+ii. (Calcutta: Government Printing Office.) 7 annas.

Ministry of Agriculture and Fisheries: Intelligence Department. Report on the Work of the Intelligence Department of the Ministry for the Two Years 1919-1921. Pp. 198. (London: H.M. Stationery Office.) 5s. net.

Ministry of Public Works, Egypt. Report on Investigations into the Improvement of River Discharge Measurements. By E. B. H. Wade. Part 2. (Physical Department Paper No. 6.) Pp. 12+14 plates. (Cairo: Government Publications Office.) P.T. 5.

Ministry of Public Works, Egypt: Physical Department. Meteorological Report for the Year 1917. Pp. x+118. (Cairo: Government Publications Office.) P.T. 30.

The Mauritius Almanac and Commercial Handbook for 1922 (which is included an Appendix on Seychelles). Compiled by A. Walker. Pp. iii+3+ xviii+viii+A66+B57+C67+D64+E40+F89+15. (Port Louis, Mauritius: General Printing and Stationery Co. Ltd.) 10 rupees.

Loughborough College, Leicestershire. Calendar, Session 1922-23. Pp. xx+216. (Loughborough.)

Forestry Commission. Second Annual Report of the Forestry Commissioners: Year ending September 30th, 1921. Pp. 44. (London: H.M. Stationery Office.) 9d. net.

Report for 1921 on the Lancashire Sea-Fisheries Laboratory at the University of Liverpool and the Sea-Fish Hatchery at Piel. Edited by Prof. J. Johnstone. No. 30. Pp. 237+13. (Liverpool.)