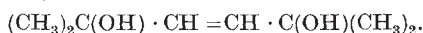


Societies and Academies.

PARIS.

Academy of Sciences, Aug. 13.—A. Lacroix: New observations on the lavas of the Marquesas and the island of Tubuai (Southern Polynesia). Complete analyses of 21 specimens are given.—Eugène Slutsky: A criterion of the stochastic convergence of ensembles of contingent values.—Silvio Minetti: An equality in the theory of integral functions.—Henri Muraour: The laws of combustion of colloidal powders.—G. Valensi: The action of nitrogen on manganese. Pyrophoric manganese, obtained by the distillation of its amalgam, heated in nitrogen under atmospheric pressure, absorbs quantities of the gas which are a function of the temperature. The experimental results are given as curves. The true composition of the manganese nitride is still unknown, but is certainly richer in nitrogen than the generally accepted Mn_3N_2 .—Eugène: Annealing anomalies after cold hardening of copper and brasses.—A. Travers and Sehnoutka: The hydrated tricalcium aluminate. The existence of this compound has been doubted: by using very dilute solutions of potassium aluminate and calcium nitrate, fine needles are obtained which have the composition $Al_2O_3 \cdot 3CaO \cdot 21H_2O$. The pH of the solution must be maintained within close limits, 11.55 and 11.62.—Bourguel and Rambaud: The determination of the spatial configuration of two *cis-trans*-ethylenic isomers. A study of the isomeric tetra-methylbutenediols,



The author's conclusions are opposed to those of Salkind.—Antoine Willemart: Contribution to the study of the coloured hydrocarbons of the rubrene family.—P. Russo and Mme. L. Russo: First geological observations on the northern Rif.—A. Magnan and A. Sainte-Laguë: The static equilibrium of fishes. A fish can remain a long time in the same place, apparently immobile. As a result of a cinematograph study of a black bass, it is shown that the fins are in continual motion, and the nature of the motion can be determined from the photographs.—K. Toumanoff: Concerning aspergillomycosis of bees. The experimental infection of bees by *Aspergillus flavus* is easily realised. Multiplication of the fungus inside the body of the insect is rare, at least with the strains employed in this research. It was proved that the sterilised filtrates from cultures of the fungus are toxic to bees.

Aug. 20.—A. Lacroix: New observations on the lavas of the Leeward Islands and the Society Islands. Complete analyses of fourteen rocks are given.—G. Bigourdan: The observatory, instruments, and observations of Delambre at the rue Sainte-Avoye.—A. Cotton: The automatic mounting of a concave grating by the method of H. C. Richards. The author's communication of Jan. 16 last was anticipated by H. C. Richards in 1912 (*Proc. Amer. Phil. Soc.*).—Charles Moureu, Charles Dufraisse, and Léon Enderlin: Researches on rubrene. The constitution of rubrene. A constitutional formula is proposed for rubrene, mainly based on the fact that on oxidation with chromic acid, *o*-dibenzoylbenzene is formed in considerable amounts. Willemart has arrived at the same formula by another method.—H. Vincent: Anticolibacillus serotherapy. The results of its use in acute or chronic infections with *Bacillus coli*. In cases of gangrenous appendicitis, complicated with perforation, or with local peritonitis, the anticolibacillus serum has proved a valuable aid to surgical treatment, and has effected rapid and unexpected cures in very grave cases. In suppurating pyelonephritis of coli bacillus nature (verified in the laboratory), the serum has proved very active in cases in which the usual treatment has proved ineffectual. Some examples are given in detail.—Krawtchouk: The convergence of some methods of the approximate integration of differential equations.—N. Stoyko: A case of equation of lighting in meridian passage observations. The corrections of the clock determined with the aid of the Bouty meridian telescope at the Paris Observatory, have shown a systematic deviation which depends on the lighting of the field of the telescope. An equation for correction is worked out.—N. Kryloff: A method for the approximate solution of the problems of mathematical physics.—Vasilescu Karpen: New researches on batteries contradicting the second law of thermodynamics. A description of experiments with a cell composed of graphite, caustic soda solution, platinised platinum. From the rate of change of the E.M.F. of this cell with temperature, the second law of thermodynamics implies a reaction between water freed from air and graphite or platinum. Such a reaction appears improbable.—G. Vavon and Crajcinovic: The hydrogenation of nitrobenzene by platinum black. The reduction of nitrobenzene by hydrogen in the presence of platinum black and benzaldehyde gives *N*-phenylphenylnitron in quantities which prove that the greater part of the nitrobenzene on reduction passes through the stage of phenylhydroxylamine.—Edouard Rock: The facies of the Jurassic in western Morocco.—E. Rothé, J. Lacoste, and Mlle. Y. Dammann: Earthquakes in France in 1927. Seventeen well-characterised earthquakes were felt in France during 1927. The Central Plateau, Alsace, and the Vosges were more stable than during 1926. In the south-east there was one violent shock, causing damage in the Mont Ventoux region, but the seismic activity was mainly manifested in Brittany and Normandy.—E. A. Martel: The four deepest abysses (natural pits) in the world (Italy, 420 to 637 metres). A description of pits at Monte-Lessini, Montenero, and Fiume. The Bertarelli or della Harna abyss has been described in an earlier communication.—V. Agafonoff: Some red soils of Cochinchina.—Mme. Hufnagel and de Nabias: Does radium act upon insects in the course of their metamorphosis? Experiments with *Calliphora* and *Hyponomeuta* showed that exposure to the gamma rays of radium was without effect on development.—Edm. Sergeant, A. Donatien, L. Parrot, F. Lestoquard: The biological conflict against bovine piropilosis due to *Theileria dispar*. Bovine theileriosis is a house disease: the tick which transmits it bites the horse; but this animal is refractory to the disease.—C. Levaditi, P. Lépiene, and Mlle. R. Schœn: The spirochætidal properties of the element vanadium. Asterogenesis round particles of vanadium. Elementary vanadium, finely divided, and in suspension in olive oil, exercises a marked curative action in spontaneous spirochætosis and in experimental syphilis.

BRUSSELS.

Royal Academy of Belgium, July 7.—P. Fourmarier: The relations of the 'massif de la Vesdre' and the synclinorium of Dinant.—E. de Wildeman: Branching of the oil palm (*Elæis guineensis*). Branching in the oil palm is due either to the death of the terminal bud or to some disease which prevents its growth.—Jean Pelseneer: Radiation in generalised relativity.—F. Dacos: Note on the velocity of the α -particles.—Alliaume: The investigation of star streams.

SYDNEY.

Linnean Society of New South Wales, July 25.—
J. R. Malloch: Notes on Australian Diptera (No. 15).—Genera and species in the families Sapromyzidae, Sciomyzidae, Borboridae, Muscidae, Calliphoridae, and Tachinidae are dealt with. Two genera, one subgenus, and ten species are described as new. (No. 16.) Deals with genera and species in the families Ortalidae, Ephydriidae, Drosophilidae, Sapromyzidae, Calliphoridae, and Stratiomyidae. One genus and nine species are described as new.—**A. M. Lea**: New species of Australian Erihrinides (Curculionidae). The paper deals with some small weevils of the subfamily Erihrinides, of which 42 species are described as new, the most interesting of these being the species of *Glaucopela* which was taken in large numbers from the nest of a bird at Ooldea in South Australia.—**A. S. Le Souef**: Notes on four little-known species of kangaroos. In the genus *Macropus*, which embraces the kangaroos, there are eight species and eleven more or less well-marked subspecies. Owing to lack of material, several of these are little known. The present paper gives more definite information about the Black-faced, Hagenbeck's, Bernard's, and the Tasmanian kangaroos.

Royal Society of New South Wales, Aug. 1.—**T. H. Harrison**: Brown rot of fruits and associated diseases in Australia (1). History of the disease and determination of the causal organism. Brown rot of deciduous fruits was introduced into Australia in the nineties of last century, and is now present in most temperate fruit-growing regions of the south-eastern fringe of Australia, but absent from South Australia and Western Australia. Comparative cultural and inoculation experiments, conidial germination, and taxonomic features of both conidial and apothecial stages, are recorded in detail. It is concluded that *Sclerotinia fructicola* (Wint.) Rehm. is the organism responsible for brown rot in Australia and New Zealand.—**R. H. Cabbage**: *Acacia* seedlings (Part 13). The seedlings are described of the following ten species of *Acacia*: *argentea*, *caesiella*, *confusa*, *ericifolia*, *harpophylla*, *homalophylla*, *horrida*, *linophylla*, *merinthophora*, and *mollissima*. In connexion with the vitality of seeds in sea-water, it was mentioned that a seed of *A. Farnesiana* and one of *A. melanoxylon* had germinated after having been immersed continuously in sea-water for seven and a half and ten years respectively.

Official Publications Received.

BRITISH.

- International Geographical Congresses: a Brief Account of their Origin, History and Proceedings. By Colonel Sir Charles Close. (Reprinted for the Members of the International Geographical Congress, London and Cambridge, 1928.) Pp. 17. (London: Royal Geographical Society.)
- University of Liverpool: Tidal Institute. Ninth Annual Report, 1928. Pp. 7. (Liverpool.)
- Philosophical Transactions of the Royal Society of London. Vol. 227, Series A. 652: The Analysis of Tidal Observations. By Dr. A. T. Doodson. Pp. 223-279. (London: Harrison and Sons, Ltd.)
- International Radiotelegraph Convention of Washington, 1927. International Radiotelegraph Convention and General and Supplementary Regulations, Signed at Washington, 25th November 1927. Pp. 172. (London: H.M. Stationery Office.) 2s. 6d. net.
- The Scientific Proceedings of the Royal Dublin Society. Vol. 19 (N.S.), No. 6: Report of the Irish Radium Committee for the Year 1927. By Maurice B. J. Hayes and Dr. Walter C. Stevenson. Pp. 43-53. 6d. Vol. 19 (N.S.), No. 7: Spectrographic Analyses of Irish Ring-Money and of a Metallic Alloy found in Commercial Calcium Carbide. By Dr. A. G. Leonard and P. F. Whelan. Pp. 55-62. 6d. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.)
- Royal Commission on Agriculture in India, Vol. 14. Appendix to the Report. Pp. vi+432+11 maps. (London: H.M. Stationery Office.)
- The Journal of the Institute of Metals. Vol. 39. Edited by G. Shaw Scott. Pp. xii+814+43 plates. (London.) 31s. 6d. net.
- Journal of the Royal Statistical Society. Vol. 91, Part 3. Pp. xii+462. (London.) 7s. 6d.

Air Ministry. Aeronautical Research Committee: Reports and Memoranda. No. 1141 (Ae. 310): The Determination of the Horsepower Height Factor of Engines from the Results of Type Trials of Aircraft. By J. D. Coales and A. L. Lingard. (T. 2320-I.C.E. 617.) Pp. 8+7 plates. 6d. net. No. 1143 (Ae. 311): The Structure of Vortex Sheets. By A. Fage and F. C. Johansen. (T. 2601.) Pp. 19+8 plates. 1s. net. (London: H.M. Stationery Office.)

The Hundred and Sixth Report of the Commissioners of Crown Lands. Pp. 35. (London: H.M. Stationery Office.) 4s. net.

Proceedings of the Malacological Society of London. Edited by R. Winckworth. Vol. 18, Part 2, August. Pp. 45 92+7 plates. (London: Dulau and Co., Ltd.) 10s. net.

Colony of Mauritius. Annual Report on Royal Alfred Observatory for the Year 1927. Pp. 3. (Mauritius.)

The Edinburgh and East of Scotland College of Agriculture. Calendar for 1928-1929. Pp. 96. (Edinburgh.)

The Botanical Society and Exchange Club of the British Isles. Vol. 8, Part 3: Report for 1927. By G. Claridge Druce. Pp. 289-558+2 plates. (Arbroath: T. Buncle and Co.) 10s.

Air Ministry. Aeronautical Research Committee: Reports and Memoranda. No. 1156 (Ae. 321): On the Flow of a Compressible Fluid Past an Obstacle. By Dr. H. Lamb. (T. 2596.) Pp. 5. 4d. net. No. 1158 (Ae. 323): The Effect of the Static Pressure Gradient on the Drag of a Body Tested in a Wind Tunnel. By H. Glauret. (T. 2601.) Pp. 12+1 plate. 9d. net. (London: H.M. Stationery Office.)

The Royal Technical College, Glasgow. Calendar for the One Hundred and Thirty-Third Session, 1928-1929. Pp. 426+xxviii. (Glasgow.)

Battersea Polytechnic. Technical College for Day Students, and Day School of Arts and Crafts: Calendar, Session 1928-1929. Pp. 47+12 plates. 3d. Domestic Science Department and Training College: Full Time Day Instruction, Afternoon and Evening Classes, Session 1928-1929. Pp. 34+8 plates. 3d. Department of Hygiene and Public Health, Session 1928-1929. Pp. 29+3 plates. 3d. Calendar of Evening and Afternoon Courses and Classes for Session 1928-1929. Pp. 30+11 plates. Free. (London.)

The Scientific Proceedings of the Royal Dublin Society. Vol. 19 (N.S.), No. 8: "Blossom-Wilt" of Apple Trees, and "Wither-Tip" of Plum Trees, with special reference to Two Biologic Forms of *Monilia cinerea* Bon. By Dr. C. Boyle, M. Murphy and Dr. H. A. Cummins. Pp. 63-76+plates 3-5. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.) 2s.

Ninth Annual Report of the Ministry of Health, 1927-1928. (Cmd. 3185.) Pp. xviii+292. (London: H.M. Stationery Office.) 5s. net.

Indian Journal of Physics, Vol. 2, Part 4, and Proceedings of the Indian Association for the Cultivation of Science, Vol. 11, Part 4. Conducted by Prof. C. V. Raman. Pp. ii+399-507+ii+ii+plates 13-20. (Calcutta.) 3 rupees; 4s.

Indian Lac Association for Research. Reports of the Committee and of the Director, Indian Lac Research Institute, Nankun, Ranchi, for the Year 1st April 1927 to 31st March 1928. Pp. ii+44. (Nankun, Ranchi.)

Journal of the Chemical Society: containing Papers communicated to the Society. August. Pp. iv+1989-2307+xii. (London: Gurney and Jackson.)

The Livingstone Lectures, 1927: The Evolution of the Physical Features of Sydney and the Blue Mountains. By Dr. W. G. Woolnough. Pp. 28. (Sydney, N.S.W.: Camden College.)

The Cawthron Institute, Nelson, New Zealand. Cawthron Lectures, Vol. 3. No. 1: A Popular Account of Evolution, by Dr. J. P. Lott; No. 2: Electricity and Matter, by Sir Ernest Rutherford; No. 3: Recent Advances in Astronomy, by J. T. Ward; No. 4: Athens, Florence and the Modern State, by Prof. A. J. Grant. Pp. 22+18+28+22. (Nelson, N.Z.)

London County Council. Lectures and Classes for Teachers: Handbook for the Session 1928-29. Pp. 84. (London.)

FOREIGN.

Union Géographique Internationale. Publication No. 3: L'Extension des régions privées d'écoulement vers l'océan. Par Emm. de Martonne et L. Aufrère. Pp. iv+197. Rapport de la Commission de l'Habitat rural. (Report of the Commission on Types of Rural Settlement.) (U.G.I., No. 1.) Pp. vii+130. Rapport de la Commission des Terrasses Pliocènes et Pleistocènes. (First Report of the Commission on Pliocene and Pleistocene Terraces.) (U.G.I., No. 2.) Pp. 123+2 planches. (Paris.)

University of California Publications in American Archaeology and Ethnology. Vol. 23, No. 9: Native Culture of the Southwest. By A. L. Kroeber. Pp. 375-398. (Berkeley, Calif.: University of California Press.)

Cornell University Agricultural Experiment Station. Memoir 115: Some Relations of Green Manures to the Nitrogen of a Soil. By T. L. Lyon and B. D. Wilson. Pp. 29. Bulletin 461: Farmers' Co-operative Business Organizations in New York. By J. F. Booth. Pp. 123. Bulletin 466: Interrelationships of Supply and Price. By G. F. Warren and F. A. Pearson. Pp. 144. Bulletin 468: Whey Butter. By E. S. Guthrie. Pp. 12. (Ithaca, N.Y.)

Agricultural Experiment Station: Michigan State College of Agriculture and Applied Science. Technical Bulletin No. 90: The Breeding of Strains of A-Tester Yellow Dent Corn. By K. M. Liu. Pp. 40. Special Bulletin No. 176: Use of Cut Flowers. By Alex Laurie. Pp. 22. (East Lansing, Mich.)

IV Congresso Internazionale di Navigazione Aerea organizzato dal Ministero dell'Aeronautica. Ufficio Aviazione Civile e Traffico Aereo. Roma 24-30 Ottobre 1927. Vol. 1: Resoconto Generale. Pp. 468. Vol. 2: Memorie; Sezione Navigazione Aerea; Sezione Turismo e Propaganda; Sezione Giuridica. Pp. 545+40 tavole. Vol. 3: Memorie; Sezione Tecnica. Pp. 550+34 tavole. Vol. 4: Memorie; Sezione Scientifica ed Aerologica; Sezione Medica. Pp. 687+22 tavole. (Roma: G. Bardi.)

Department of the Interior: Bureau of Education. Bulletin, 1928, No. 4: Commercial Education in 1924-1926. By J. O. Malott. Pp. 33. (Washington, D.C.: Government Printing Office.)

Trinity College. A List of Books for a College Student's Reading: Being the Trinity Booklist. Edited by Prof. Harry Todd Costello. Second edition, revised. Pp. 116. (Hartford, Conn.: Trinity College.)