Societies and Academies

PARIS

Academy of Sciences, July 1 (*C.R.*, **201**, 1–104). LOUIS BLARINGHEM : The duplication of the flowers of the wallflower (*Cheiranthus Cheiri*). JEAN REY : The energy yield of thermo-compressors. Definitions and values. The efficiency of a thermo-compressor can be defined in six ways, all rational. The values differ, and if the compressor is bought under guarantee, the exact definition of field must be specified. H. GRUYELLE and CHARLES POISSON : The magnetic anomalies of the crystalline massif of Madagascar. The magnetic survey by E. Colin between 1901 and 1906 gave magnetic charts of great complexity due to the presence of anomalies. These are now shown to be very local and are mainly due to the presence of magnetite in certain of the underlying rocks. ANDRÉ CARREL and CHARLES A. LINDBERG : The culture of entire thyroid glands. The thyroid gland, with its epithelial cells, its conjunctive tissue, arteries and veins, continues to live for at least 20–30 days under the conditions described in these experiments. Its structure, the structure and activity of its follicles vary rapidly with the chemical composition and the physical and physico-chemical conditions of the liquid circulating in the vessels. WALTER S. ADAMS was elected *Correspondant* for the Section of Astronomy in succession to the late F. Gonnessiat. PIERRE DAURE : Remarks on the validity of statistical conceptions applied to social phenomena. GARRETT BIRKHOFF : Discrete spaces. RAYMOND JACQUES : Certain systems of partial differential equations. ALFRED ROSENBLATT : The Green's function of a limited domain of Euclidian space of three dimensions. M. KREIN : 'Charged' integral equations. W. BŘEČKA : Multiply monotonic polynomials which deviate least from zero. FRÉDÉRIC ROGER : Some metric applications of the idea of the bilateral contingent. LARS AHLFORS : The type of a Riemann surface. ALBERT TOUSSAINT and MIROSLAV NÉNADOVITCH : Contribution to the study of certain rigid biplane cells of finite span. MAURICE DENIS : Contribution to the experimental study of sustaining wings at large incidences. E. M. ANTONIADI : Recent observations of the planet Mars with the 83 cm. telescope of Meudon observatory. The appearance of Mars shows no great difference from that shown in 1933. Details of the observations are given. FRÉDÉRIC MARGUET : The curve of equal azimuth and its use in navigation. GEORGES ALLARD : Statistical mechanics and the equilibrium of radiation and of matter. ANDRÉ LÉAUTÉ : The measurement of the surface tension of viscous substances such as tars and bitumens. Studies of the capillary tube method, paying special attention to the time necessary to attain equilibrium, one bitumen requiring 360 hours. Discussion of the causes of the large divergences between the results obtained by this and by other methods. CLAUDE CHARMETANT : The electrolysis of nickel and cobalt chlorides in solutions of mixtures of water and ethyl alcohol. HUBERT FORESTIER : Magnetisation at a high temperature of ferromagnetic powders. Powders (precipitated ferrites, oligist) heated to the temperature of the Curie point and cooled in a magnetic field showed residual magnetism. This is now shown to depend on three fundamental factors, strength of the field, fineness of the grains, and the crystalline structure. NICOLAS SZULC : Study of the structure of the electric arc. From the results of the experiments described it is concluded that the electric arc is divided into two parts : a conducting part where the electrical energy is partly used in producing dissociation of exothermic compounds and the formation of endothermic compounds, and a slightly conducting part where exothermic compounds are formed. HUA-CHIH CHENG and JEAN LECOMTE : The modes of vibration of the 1,2,dihalogen derivatives of ethane. The results tabulated are based on Raman spectra and maxima of infra-red absorption. MICHEL DUFFIEUX : The phosphorescence of nitrogen peroxide. The intensity of the bands of the second positive group of N_2. STÉPHAN PROCOPIU : The depolarisation of light by colloidal solutions, by crystalline precipitates and by solid deposits on glass. MAURICE LUCAS : The variation of the length of cement as a function of the hygrometric state of the air. The experimental results are given graphically in three curves, showing the change of length as a function of the weight of water absorbed, and as a function of the hygrometric state of the air, and the change of weight as a function of the hygrometric state of the air. JEAN MOLNAR : The physicochemical properties of picric acid in the *p*H scale. The experimental results can be explained on the hypothesis that picric acid passes through seven molecular forms with changing *p*H. PIERRE JOLIBOIS and FRANÇOIS OLMER : A new method of catalysis. Application to ammonia. ANDRÉ MICHEL and ANDRÉ GIRARD : Thermomagnetic analysis as a means of proving the existence of weak solid solutions of the oxides of iron. F. BOURION and E. ROUYER : The cryoscopic determination of the total hydration of the ions of magnesium chloride. JEAN BUREAU : The system calcium nitrite, water. MLLE. MARIE FALINSKI : The increase in the rotatory power of mannite by zirconium salts in aqueous solutions. MARCEL PATRY : The telluric acid group. Nomenclatures. T. KARANTASSIS and L. CAPATOS : The complex iodine compounds of divalent germanium. ORESTE MILLER and LÉON PIAUX : The Raman spectra of *meta-* and *para*-dimethylcyclohexane *cis* and *trans* isomers, and of 1,1,dimethylcyclohexane. CONSTANTIN GHEORGIU and MLLE. LUCIE MANOLESCU. Heteropolar combinations : complex salts of silver and mercury with 2,thio-4-hydroxy-1,2,3,4-tetrahydroquinazoline. CHARLES LAPP : The specific rotatory power of salts of quinine, quinidine, cinchonine and cinchonidine. PAUL BRENANS and PIERRE LARIVAILLE : Iodo-*m*-nitrophenols. EDMOND BOCQUIER : The existence of a group of large fossil cavities of the Monasterian epoch on the coast of Talmondais (Vendée). V. BABET and RAYMOND FURON : The continental post-Hercynian formations of the west of Africa (western Africa and equatorial Africa). MAURICE GENCE : The bases of the Klippes of Etienne-Encauron, to the north of Sainte-Baume. GEORGES DENIZOT : The successive tectonic phases in the neighbourhood of Marseilles. PIERRE URBAIN : The separation of the various constituents of marls. LOUIS DANGEARD : The black Eocene clays of the Londe forest (Lisieux geological sheet) containing algæ belonging to the genus *Botryococcus*. J. LEGENDRE : The maritime mosquito. BORIS EPHRUSSI and G. W. BEADLE : The transplantation of the imago discs in *Drosophila*. LOUIS COTONI and JACQUES POCHON : The application to antistreptococcic sera of a new method of titration by the neutralisation of the antibodies *in vitro*. RADU CODREANU : Malignant neoplasis in the hæmocœle of Ephemers under the action of *Symbiocladius rhithrogenae*, a Chironomid ectoparasite.

CAPE TOWN

Royal Society of South Africa, June 19. M. RINDL and M. L. SAPIRO: The alkaloids of *Strychnos Henningsii* (3). Isolation of a second crystalline alkaloid. On the basis of a large number of analyses of the crystalline alkaloid isolated both by the authors and by the firm of E. Merck, of Darmstadt, Germany, the formula $C_{22}H_{25}N_2O_4(OCH_3)$ is ascribed to this compound. This formula differs from the one previously suggested. The alkaloid is probably phenolic. The crude alkaloid is accompanied by very small quantities of a second alkaloid, which can be removed by continuous percolation with ether and purified by high vacuum sublimation. Analyses suggest a formula differing from that of the first crystalline alkaloid by an increment of CH_2. The likelihood is that the two alkaloids are the monomethoxy and dimethoxy derivatives of the same mother substance. There is also evidence of the presence of a third crystalline alkaloid. J. L. B. SMITH: The genus *Tripterodon*, Playfair. The fish *Triperodon*, the anatomy of which and taxonomic features have hitherto been inadequately studied, has been investigated. Morphologically it appears that it should be included in the family *Platacidae*. J. BURTT DAVY: *Taraxacum magellanicum*, Comm., in South Africa. S. BIESHEUVEL: The nature of temperament. The behaviour qualities grouped together under the heading of temperament have been reduced to three distinct units, for each of which a psychological explanation has been found. The relationship of these fundamental factors to environmental influences and organic processes has been tentatively determined. R. S. ADAMSON: Note on the stem structure of *Boscia rehmanniana*, Pest. The old stems have anomalous secondary thickening with successive extrafascicular cambia. These arise as separate portions and develop tissues both centrifugally and centripetally. The centrifugal growth is much greater than the centripetal.

GENEVA

Society of Physics and Natural History, June 20. M. GYSIN: The copper minerals of Kinsenda (Belgian Congo) (3). On the presence of a hypogene covelline and a supergene covelline. The author describes two varieties of covelline observed in the copper minerals of Kinsenda. The first variety forms lamellar inclusions in bornite, which start from the (100) cleavages to develop in the octohedral (111) directions; it is of hypogene origin. The second variety, of supergene origin, forms large tufts which spread over outside the grains of chalcopyrite and of white chalcosine, following generally the sphenoidal octohedral directions of the two minerals. TH. HILLER: (1) Contribution to the study of opaque minerals by the methods of impressions. Improvement in the technique of electrolytic attack. The author describes a technique for etching electrolytically and then taking a chemical print of the grains of isolated minerals in the gangue. This method allows opaque conducting minerals, completely refractory to ordinary chemical reagents, to be attacked, and shows their principal elements without destroying the specimens. (2) The determination of some linneites of Northern Rhodesia and Katanga by the method of imprints. The author describes the chemical reactions utilised for identifying cobalt and copper in some linneites with polished surface by the method of imprints. The simultaneous presence of these two elements is a character peculiar to linneite, and this permits its differentiation from a series of optically analogous minerals. P. WENGER, CH. CIMERMANN and MLLE. NYSZEWIANSKA: The microestimation of cadmium by means of oxyquinoline.

Forthcoming Events

[*Meetings marked with an asterisk are open to the public*].

Sunday, August 25

BRITISH MUSEUM (NATURAL HISTORY), at 3 and 4.30.—Miss M. H. Smith: "Fish and Whales".*

IMPERIAL BOTANICAL CONFERENCE, August 27–30. To be held in the rooms of the Linnean Society, Burlington House, London, W.1.

August 28. Sir Arthur Hill: Presidential address.

Official Publications Received

Great Britain and Ireland

London Shellac Research Bureau. Technical Paper No. 3: Fundamental Physical Properties of Lac. Part 1: Mechanical Properties. By Dr. Lal C. Verman. Pp. 38. (London: London Shellac Research Bureau.)

Seale-Hayne Agriculture College: Department of Plant Pathology. Eleventh Annual Report for the Year ending September 30th, 1934. (Pamphlet No. 44.) Pp. 59. (Newton Abbot: Seale-Hayne Agricultural College.)

Force and Youth. By Lord Davies. (New Commonwealth Pamphlets, No. 9.) Pp. 10. (London: The New Commonwealth.) 3*d*.

Rothamsted Experimental Station, Harpenden. Report for 1934. Pp. 259. (Harpenden: Rothamsted Experimental Station.) 2*s*. 6*d*.

Other Countries

Bulletin of the Michigan College of Mining and Technology. New Series, Vol. 8, No. 3: General Information for the Year 1935–1936. Pp. 164. (Houghton, Mich.: Michigan College of Mining and Technology.)

Proceedings of the United States National Museum. Vol. 83, No. 2977: Parasites of Fishes in Galveston Bay. By Asa C. Chandler. Pp. 123–157+plates 6–12. Vol. 83, No. 2978: On the Reptilia of the Kirtland Formation of New Mexico, with Descriptions of New Species of Fossil Turtles. By Charles W. Gilmore. Pp. 159–188+plates 13–18. (Washington, D.C.: Government Printing Office.)

University of Illinois: Engineering Experiment Station. Bulletin No. 270: Laboratory Tests of Three-Span Reinforced Concrete Arch Bridges with Decks on Slender Piers. By Prof. Wilbur M. Wilson and Ralph W. Kluge. Pp. 134. 1 dollar. Bulletin No. 273: Mechanical—Electrical Stress Studies of Porcelain Insulator Bodies. By Prof. Cullen W. Parmelee and Prof. John O. Kraehenbuehl. Pp. 72. 75 cents. (Urbana, Ill.: University of Illinois.)

Baltic Geodetic Commission. Special Publication No. 4: Remeasuring of the Base Lines of Lolland and Öland in the Year 1933. By Ilmari Bonsdorff. Pp. 36. (Helsinki: Baltic Geodetic Commission.)

Suomen Geodeettisen laitoksen julkaisuja. No. 21: Zwei Ausgleichungen des grossen südfinnischen Dreieckskranzes. Von V. R. Örlander. Pp. 66. (Helsinki: Finnischen Geodätischen Institutes.)

The Journal of the Shanghai Science Institute. Section 3, Vol. 2: Bibliographical Introduction to the Study of Chinese Insects. By Yoshio Ôuchi. (Entomological Report No. 1.) Pp. iii+533. (Shanghai: Kelly and Walsh, Ltd.; Tokyo: Maruzen Co., Ltd.) 5 M. dollars.

Expédition Antarctique Belge. Résultats du voyage de la *Belgica* en 1897–99 sous le commandement de A. de Gerlache de Gomery. Rapports scientifiques. Zoologie—Oligochètes. Par Dr. Léon Cernosvitov. Pp. 11. Zoologie—Pycnogonides. Par Dr. Louis Giltay. Pp. 16. Botanique—Observations sur des Algues. Par E. de Wildeman. Pp. 47. (Bruxelles: Musee Royal d'Histoire Naturelle.)

The Currents in the St. Lawrence Estuary, Ste. Anne des Monts to Father Point, 1932–1933. Pp. 42+3 plates. (Ottawa: Canadian Hydrographic Service.)

Sudan Government. Annual Report of the Gezira Agricultural Research Service for the Year ended 31st December 1934 relating to Experimental Results obtained in the Season 1933–34. Pp. xi+170+14 plates. (Wad Medani: Gezira Agricultural Research Service.)

Department of Agriculture: New South Wales. Science Bulletin, No. 46: Plant Diseases recorded in New South Wales. By Dr. R. J. Noble, H. J. Hynes, F. C. McCleery and W. A. Birmingham. Pp. 47+1 plate. (Sydney: Government Printer.)

Report of the Aeronautical Research Institute, Tôkyô Imperial University. No. 122: On the Wall Interference of a Circular Wind Tunnel. By Kwan-ichi Terazawa. Pp. 75–81. 15 sen. No. 123: On the Smokeless Zone around a Heated Platinum Ribbon. By Syûzô Miyake. Pp. 83–106+7 plates. 40 sen. No. 124: Psychologische Untersuchung über den zeitlichen Verlauf der Einflüsse des niederen Luftdrucks. Von Yenziro Awadi und Tuneo Toyohara. Pp. 107–123. 35 sen. (Tôkyô: Kôgyô Tosho Kabushiki Kaisha.)