

Societies and Academies

Paris

Academy of Sciences (207, 7-100, July 4, 1938).

H. DESLANDRES: Universal constant of band spectra. Attribution of the lines of the band to causes other than the rotation of the molecule. A simple relation is found between the frequencies of the molecule and the 'activated' electrons of its atoms.

R. FOSSE, R. DE LARAMBERGUE and J. GAIDDON: Synthesis of cyanamide by the action of silver oxide on formaldehyde and ammonia.

R. ESNAULT-PELTERIE: The output of [air]-screws.

P. FOURMARIER: The reciprocal relation between the discontinuities in the fold zone of Cornwall (England).

L. COUFFIGNAL: The operations of pure mathematics are all mechanical functions.

H. LAUGIER and Mlle. D. WEINBERG: Analysis of the spread [about a mean] of the total marks in the examination for the *baccalauréat*.

J. DIEUDONNÉ: Complete uniform spaces.

R. POTIER: Spaces with affine connexion and generalized Riemannian spaces.

L. I. GAMA: Additivity of the contingent.

A. BERMANT: Remark on Schwarz's lemma.

J. GALIBOURG and P. Laurent. Subpermanent deformations [of a body].

R. DUCHÈNE: New method for measuring gas supplies. The principle used is to inject a bubble of a foreign gas into the gas main and to ascertain the time it takes to reach a point at a known distance 'downstream'.

L. VIAUD: Study in a wind-tunnel of the aerodynamic characteristics of [wings fitted with] *dispositifs hypersustentateurs* placed near the ground.

G. BADARAU: Passage of corpuscles across spherical potential barriers.

A. VÉRONNET: Mechanical determination of the constitution of atomic nuclei.

T. PECZALSKI: Statistical interpretation of the reactions between solids at high temperature.

R. MÉRIGOUX: Different structures of the mist deposited by blowing on certain [chemically] fatty substances.

P. TONGAS: Calculation of the gas constant for steam from the experimental results adopted by the International Conference of Steam Tables. The mean value for R is 47.062.

Y. LE GRAND: A logarithmic galvanometer.

V. P. MIHU: Absorption of energy by high-frequency currents in Geissler tubes.

T. V. IONESCU: New observations on ionized gas oscillators in a magnetic field.

S. GORODETZKY: An arrangement for improving the functioning of multiple coincidence detectors.

R. CHEVALLIER and Mlle. S. MATHIEU: Magnetic contribution of the constituents of iron hydroxide in an alkaline medium.

A. GUILLET: Control and measurement with the aid of images obtained by multiple reflections.

MME. A. VASSY and E. VASSY: Absorption of light by the lower atmosphere.

MME. J. GAVORET: Adsorption and swelling of α -cellulose.

E. MOLES and A. ESCRIBANO: Limiting density of the gases O_2 and CO_2 . Atomic weight of carbon. The most probable value for the latter is given as 12.007.

Mlle. S. THÉVENET: Influence of electrolytes on the viscosity of an iron hydroxide sol.

P. CHEVENARD and A. PORTEVIN: New method for the study of metallic diffusion. The curve of magnetization against temperature gives a series of Curie points for the various concentrations and also gives extreme concentrations.

M. BACKÈS: Constitution of aldol and ethanal.

V. FROLOW: Analysis of the annual maximum of the Dnieper.

Mlle. Y. BOISSE DE BLACK: Glacial deposits of the basin of Condat (Cantal).

G. DÉJARDIN and R. BERNARD: The height of the layer in the atmosphere from which the D lines are emitted, and the origin of sodium atoms in this layer.

L. PLANTÉFOL: Generality of extrinsic oxidations. Extrinsic oxidations appear to take an important part in gaseous exchanges, and can, under various physiological conditions, constitute an appreciable part of respiration.

M. SIMONET, R. CHOPINET and G. SOUILJAERT: Obtaining a tetraploid *Linum usitatissimum* L. by the application of colchicine. The seeds were immersed in aqueous solutions of colchicine.

A. PEYRON and H. LIMOUSIN: The development, inside the veins in multiple *tumeurs à tissus* of the human testicle, of polyembryonic parthenogenic embryos.

Mlle. S. BELLUC, J. CHAUSSIN, H. LAUGIER and MME. T. RANSON: Variations in the elimination of the principal substances of [human] urine.

MME. A. DRILHON and R.-G. BUSNEL: Quantity and distribution of flavin in the Lepidoptera.

M. DELAVILLE: Effect of injections of morphine hydrochloride on the hepatic and cerebral lecithins of the guinea pig.

M. PIETTRE: Cold ultracentrifugation and the stabilization and sterilization of biological media.

C. CHAMPY and J.-P. LAVÉDAN: Production of tumours by sustained regeneration in the testicles of birds.

Moscow

Academy of Sciences (C.R., 19, No. 4; 1938).

A. ALEXANDROV: A general equation for closed plane surfaces.

N. LUSIN: Existence of algebraic surfaces without a continuous connected grid (3), (4).

J. KHURGIN: Upper limit of ion energy obtainable by means of the cyclotron.

L. V. GROŠEV and I. M. FRANK: Nuclear impulse in pair formation.

V. ČERNIAEV: Influence of noble gases on the intensity of the lines of the hydrogen and the deuterium Balmer series.

I. K. KIKOIN and S. V. GOOBAR: Gyromagnetic effect in superconductors.

I. D. BORNEMAN-STARINKEVITCH: Some isomorphic substitutions in apatite.

S. A. BOROVIK and S. K. KALININ: Spectroscopic analysis of the products of lead and zinc plants.

A. V. PEIVE: Carboniferous gypsums and the Devonian red sandstones of Tian-Shan.

L. LUNGERHAUSEN: (1) The terraces of the Dniester. (2) Pliocene hydrography of the South Ukraine.

A. F. FERSMAN: The number of mineral species.

L. A. KOSSOY: Intergrowth of quartz and feldspars from the pegmatite veins of Karelia.

R. A. MASING: Genetical and cytological analysis of lethals in *Drosophila* occurring in Nature.

L. N. KOKHANOVSKAYA: Physiological sterility in the cultivated Columbian potato, *Solanum rybinii* Juz. and Buk.

V. I. PATRUSHEV: Inheritance of biochemical characters in animals in connexion with growth. (3) On some indices of the blood composition of the hybrids between Bactrian camels and dromedaries in connexion with heterosis. (4) Differences in the composition of blood in horses, asses and mules.

G. S. ŽUKOVA: Influence of light upon the development of pollen of barley.

N. N. MEDVEDEV: Contributory effect of heat with irradiation in the production of mutations.

M. CH. CHAJLACHJAN and L. P. ŽDANOVA: Role of growth hormones in form-building processes. (3) Effect of hetero-auxin treatment of seeds upon growth and development of plants.

S. M. MASHTAKOV: Qualitative changes of rubber in the kok-saghyz roots in the course of plant development.

A. A. NICHIPOROVICH and V. N. BOUROVAYA: Rubber accumulation in kok-saghyz as a function of its biological process of maturation.

CH. S. KOSHTOYANZ: Mechanism of formation of the chemical mediators of nerve impulses.

Z. G. ŠCEDRINA: The distribution of Foraminifera in the Kara Sea.

J. BALL: Notes on the ecology of *Diplomesodon pulchellum pulchellum* Licht. in the Volga-Ural sandy regions.

N. L. GERBILSKY: (1) Effect of cranial injections of hypophysis suspensions in teleosts. (2) The influence of the gonadotropic agent of the hypophysis on the spawning in *Acipenser stellatus*.

Tokyo

Imperial Academy (*Proc.*, 14, No. 6, June 1938).

TATSUO KAWATA: A theorem concerning the non-vanishing of functions.

TOSIO KITAGAWA: Characterizations of the fundamental operations by means of the operational equations.

KÔSAKU YOSIDA: On the fundamental theorem of the tensor calculus.

SHIGEHICO SUGASAWA and KIICHIRO KAKEMI: Studies on the synthesis of dibenzopyridocoline derivatives (1). A synthesis of 5, 18, 9, 14-(2, 3, 11, 12-tetramethoxy)-dibenzo-6, 7, 15, 16-tetrahydro-pyridocoline.

HISASHI KUNO: (1) Hypersthene from Odawaramati, Japan. (2) The occurrence of a primary cummingtonitic hornblende in some dacites from Japan.

ŠYOZI IZIRI: On the embryonic tooth $M_2 (= m'_2)$ and the os sacculi dentis of *Desmostylus japonicus*.

MASUZO UÉNO: Stratification of *Noctiluca* in a brackish water lake of Hokkaido, Japan.

YOSHITARÔ KATÔ: The relation of the anterior pituitary of the fowl to the production of the gonad-stimulating hormone. Castration causes an increase in the potency of the pituitary body. The basophilic cells are responsible for the production of the gonad-stimulating hormone.

Appointments Vacant

APPLICATIONS are invited for the following appointments, on or before the dates mentioned:

PRINCIPAL of the Sunderland Technical College—The Director of Education, Education Offices, 15 John Street, Sunderland (September 12).

JUNIOR SCIENTIFIC OFFICERS at the Road Research Laboratory, Harmondsworth, Middlesex—The Establishment Officer, Department of Scientific and Industrial Research, 16 Old Queen Street, Westminster, S.W.1 (September 13. Quote ref. J./38/10).

ASSISTANT (Grade III) in the External Ballistics Department of the Ordnance Committee, Woolwich—The Secretary, Ordnance Committee, Royal Arsenal, Woolwich, S.E.18 (September 16).

SCIENTIFIC OFFICERS in the Air Ministry Scientific Research Pool (radio communication problems)—The Chief Superintendent, Royal Aircraft Establishment, South Farnborough, Hants (September 16. Quote ref. No. 604/0).

JUNIOR SCIENTIFIC OFFICER (physicist) at the Fuel Research Station, East Greenwich—The Establishment Officer, D.S.I.R., 16 Old Queen Street, Westminster, S.W.1 (September 20. Quote J 38/11).

SUPERINTENDENT of the Marine Division of the Meteorological Office—The Under-Secretary of State (S.2.A.), Air Ministry, Aadastral House, Kingsway, London, W.C.2 (September 30).

EXAMINER (physicist) in the A.I.D. Test House, Kidbrooke, S.E.3—Under-Secretary of State, Air Ministry, Kingsway, London, W.C.2 (Quote ref. No. I.G.17).

Reports and other Publications

(not included in the monthly Books Supplement)

Great Britain and Ireland

British Museum (Natural History). John Murray Expedition, 1933-34. Scientific Reports, Vol. 5, No. 7: The Flabellid and Turbidolid Corals. By J. Stanley Gardiner and Peggy Waugh. Pp. 167-202+7 plates. (London: British Museum (Natural History).) 5s. [168]

Strangeways Research Laboratory, Cambridge. Report for 1937. Pp. 23. (Cambridge: Strangeways Research Laboratory.) [178]

Other Countries

Proceedings of the United States National Museum. Vol. 85, No. 3037: A New Genus and Two New Species of the Dipterous Family Phoridae. By Charles T. Greene. Pp. 181-186. (Washington, D.C.: Government Printing Office.) [158]

Division of Fish and Game of California: Bureau of Marine Fisheries. Fish Bulletin No. 51: The High Seas Tuna Fishery of California. By H. C. Godsil. Pp. 41. (Terminal Island, Calif.: California State Fisheries Laboratory.) Free. [158]

Kungl. Svenska Vetenskapsakademiens Handlingar. Serien 3, Band 16, No. 5: The Alcyonarian Genus Bathyalcyon. By Sixten Bock. Pp. 54+2 plates. (Stockholm: Almqvist and Wiksells Boktryckeri-A.-B.; London: H. K. Lewis and Co., Ltd.) [168]

League of Nations: Child Welfare Information Centre. Summary of Annual Reports received from Governments between the Close of the First Session and the Close of the Second Session of the Advisory Committee on Social Questions (May 1st, 1937-May 5th, 1938). (Official No.: C.81.M.36.1938.IV.) Pp. 160. (Geneva: League of Nations; London: George Allen and Unwin, Ltd.) 3s. [168]

Nyasaland Protectorate. Annual Report of the Forestry Department for the Year ended 31st December 1937. Pp. 27. (Zomba: Government Printer.) 1s. [168]

Rubber Research Institute of Malaya. Annual Report 1937. Pp. ii+211+2 plates. (Kuala Lumpur: Rubber Research Institute.) 1 dollar. [168]

Colony and Protectorate of Kenya: Forest Department. Annual Report, 1937. Pp. 29. (Nairobi: Government Printer.) 1s. [168]

Report of the Kodaikanal Observatory for the Year 1937. Pp. 4. (Delhi: Manager of Publications.) 3 annas; 4d. [168]

Indian Central Cotton Committee: Technological Laboratory. Technological Bulletin, Series A, No. 42: Empirical Relationships between Count, Lea Strength and Staple Length of Indian Cottons. By V. Venkataraman and Dr. Nazir Ahmad. Pp. ii+16. (Bombay: Indian Central Cotton Committee.) 8 annas. [168]

Hokkaidô Imperial University Calendar, 1937-1938. Pp. iii+227. (Sapporo: Hokkaidô Imperial University.) [168]

Carnegie Institute of Washington. Catalogue of Publications. Pp. iv+146. (Washington, D.C.: Carnegie Institution.) [168]

Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. 90. The Occurrence of Flints and Extinct Animals in Fluvial Deposits near Clovis, New Mexico. Part 6: Report on Field Season of 1937. By J. L. Cotter. Pp. 113-118. Part 7: Pleistocene Mollusks from the Clovis Gravel Pit and Vicinity. By William T. Clarke, Jr. Pp. 119-122. On the Relationship of the Nearctic Genus *Dracotettix* (Orthoptera: Acrididae). By James A. G. Rehn. Pp. 123-132. (Philadelphia: Academy of Natural Sciences.) [178]

U.S. Department of the Interior: Office of Education. Bulletin, 1937, No. 30: Occupational Experiences for Handicapped Adolescents in Day Schools. By Elise H. Martens. Pp. iv+61. (Washington, D.C.: Government Printing Office.) 15 cents. [178]