

Science News a Century Ago

Societies and Academies

Italian Association for the Advancement of Science

In the spring of 1839 many distinguished individuals in Great Britain received circulars announcing the formation of an Italian Association for the Advancement of Science and inviting co-operation in its work. The circular contained the signatures, among others, of Prince Carlo L. Buonaparte, Chev. Antinoni, director of the Royal Museum of Natural History in Florence, G. B. Amici, the astronomer and chancellor of the University of Pisa and of Prof. Savi, professor of natural history there. A translation of a part of the circular was given in the *Athenæum* of April 20, 1839. "Following the advice of many, and the approbation of others," the circular said, "and in conformity with the successful practice in Germany, we have now to announce that from the 1st to the 15th of October will be opened the Association of the Professors and Cultivators of the Physical Sciences in Italy, including Medicine and Agriculture."

The Medical Society of Bombay

On April 20, 1839, the *Athenæum* published a notice of the "Transactions of the Medical and Physical Society of Bombay, Vol. 1". "From the present volume," the journal said, "we learn that a new society has been formed for the purpose of medical improvement in the East; and it is remarkable on two accounts: First, we observe in it a tendency to return to the methods of the older physicians, and to look to external natural agents, as indexes pointing to the character of diseases. . . . The second circumstance to which we have alluded, is a desire manifested by the profession 'to give the permanent benefits of medical science to the people of India, by introducing an efficient system of medical education'. This is a matter of more extended importance than regards its simple relation to the health of the Hindoo population."

Experimental Subaqueous Explosions at Chatham

UNDER the title "Experimental Subterraneous and Subaqueous Explosions at Chatham by the Voltaic Battery" a correspondent of the *Mechanics' Magazine* on April 20, 1839, described the progress being made under Colonel Pasley's direction. "For several months past," he wrote, "the Royal Engineers at Chatham under Colonel Pasley have been trying experiments in firing gunpowder by the voltaic battery, and after many vicissitudes of partial success and of failure, they have at last succeeded in bringing this process to as much perfection as it seems capable of—that is, as much certainty as the former method of firing mines in dry soil. They have repeatedly fired gunpowder at the distance of 500 feet, with their conducting wires either buried underground or led entirely under water, excepting a few feet connected with the battery, which in their subaqueous explosions was in a boat on the Medway, the powder being lodged at the bottom of that river. . . . The voltaic battery used was that of Professor Daniell's improved construction, which from retaining its energy much longer than any other form of voltaic battery he has named the constant voltaic battery." Colonel (afterwards General Sir) Charles William Pasley, F.R.S. (1780–1861), in 1839–41 used the methods he developed at Chatham for blowing up the wreck of the *Royal George* which had foundered at Spithead on August 29, 1782.

London

Royal Society (*Proc.*, A, 170, 145–299; 1939).

S. LEVINE: Problems of stability in hydrophobic colloidal solutions. (1) On the interaction of two colloidal metallic particles. General discussion and applications. (2) On the interaction of two colloidal metallic particles: mathematical theory.

F. C. FRANK: Melting as a disorder phenomenon.

L. H. MARTIN and A. A. TOWNSEND: β -Ray spectrum of Ra E.

S. TOLANSKY: Nuclear spin of iodine. (4) A new type of hyperfine structure deviation from the interval rule.

J. MONTEATH ROBERTSON and A. R. UBBELOHDE: Structure and thermal properties associated with some hydrogen bonds in crystals. (1) The isotope effect. (2) Thermal expansion.

M. BORN and K. FUCHS: Fluctuations in electromagnetic radiation.

L. C. JACKSON: Principal magnetic susceptibilities of neodymium sulphate octahydrate at low temperatures.

J. T. RANDALL: Fluorescence of compounds containing manganese.

H. DAVENPORT: Sums of positive integral k th powers.

Paris

Academy of Sciences (*C.R.*, 208, 777–852, March 13, 1939).

C. BENEDICKS: Geometrical representation of the fourth dimension, etc.

E. HALPHEN: Co-variation.

J. MARCINKIEWICZ: Summability H_k of Fourier series.

H. TORNEHAVE: Generalization of Jensen's formula to analytical functions of many variables.

H. PAILLOUX: Distribution in space of the rotations of an inextensible surface in movement.

G. LITTAYE: Modes of resolution of a liquid jet into drops.

MME. M.-A. TONNELAT: Equations of the photon: relation with the equations of Dirac and of Kemmer.

J. MARIANI: The nuclear field and the elementary quantum of length.

A. COLOMBANI: Development with heat of the conductivity of thin layers of nickel (80–1,200 m μ).

P. DE BECO: Verification of Faraday's laws at the positive pole in 'spark' electrolysis.

M. DODERO: Electrolysis of fused mixtures of alkaline fluosilicates and fluorides or oxides. Compounds of formulæ $SiMn_2$, $SiFe_2$, $SiCr_3$ and Si_2Ti have been prepared.

S. VENCOV: Ultra-violet absorption spectra of some organic molecules.

S. SCHLIVITCH: Sensibilization of reversible photo-voltaic piles.

S. NIKITINE: Anisotropy of absorption of different radiations for molecules of some photosensitive colouring matters.

P. BARCHEWITZ: $(OH)_p$ bands of acids in the vapour state; study of a new harmonic.

H. MURAOUR and J. BASSET: Study of the influence of high pressures on the propagation of reactions in explosive solids, and in particular in priming explosives. At pressures of the order of 10,000 kgm./cm.², the explosive is decomposed without producing any mechanical effect.

W. HELLER and E. VASSY: Co-existence of reversible and irreversible aggregates in thixotropic gels with hydrophobe particles.

P. SÜE: Chlorination of niobium pentoxide and tetraoxide.

J.-A. GAUTIER: Action of bromine on some *N*-substituted α -pyridones.

G. DARZENS: Halogen-methylation of aromatic derivatives in homogeneous acetic medium.

R. ABRARD and E. A. DE LA RÛE: Marine quaternary beds of the north-east coast of French Somaliland.

E. GAGNEBIN: Discovery of a fragment of the Simme nappe in the Pre-Alps of Chablais.

L. ÉBLÉ and G. GIBAUT: Values of the magnetic elements at the observatory of Chambon-la-Forêt (Loiret) on January 1, 1939.

R. BERNARD: Origin of the coloration of the aurora borealis of type *B*.

R. ÉCHEVIN and A. BRUNEL: Utilization of glyoxalic ureides by the soy-bean.

P. BERGAL: Contribution to the study of the lodicules of barley (*Hordeum sativum* Jess.).

P.-P. GRASSÉ: Relations of a termitophile coleopterous larva (*Troctontus appendiculatus* Silv.) with its hosts. There appears to be mutual attraction of an olfactory and gustatory nature.

G. BROOKS and R. PAULAIS: Distribution and localization of the carotinoids, flavins and *l*-ascorbic acid in lamellibranch molluscs: oysters and green and white Portuguese oysters.

Mlle. M. HAMON: Characterization of some α -amino acids entering into the constitution of the spermatophores of the Cephalopoda.

Mlle. G. MARTRET: Study of the variations of molecular concentration of the urine of the freshwater stenohaline teleosts, as a function of the variations of salinity of the exterior medium.

MME. A. DRILHON and R.-G. BUSNEL: Presence and content of flavin in the Malpighian tubes of insects.

Mlle. J. PORTIER and MME. A. DRILHON: Biochemical study of the internal medium of *Eriocheir sinensis* and its adaptation to changes of salinity.

H. BULLIARD, I. GRUNDLAND and A. MOUSSA: Activity of exchange of phosphorus and radio-phosphorus in the phosphatids of cytoplasm. Radio-phosphorus accumulates in tissues where active chemical changes are taking place and in cellular elements rich in phosphatids.

I. BERTRAND and R. LECOQ: Peripheral nervous lesions observed in the course of polyneuritis in the pigeon induced by simple addition of lactic acid to diets rich in glucides, proteins or lipids, and containing high proportions of vitamin B.

Vienna

Academy of Sciences, January 26.

WILHELMINE POLACZEK: X-ray absorption spectra of the *M* series of gold, thallium, lead, bismuth, thorium and uranium. The *M* absorption edges are found to have a width of between 8 and 36 volts. The observed wave-lengths are appreciably smaller than those calculated from the relation $L_{III} - L_{III} M_V$.

K. GRAFF: Photometric curve of the phase of the planet Mercury.

Forthcoming Events

[Meeting marked with an asterisk is open to the public.]

Wednesday, April 19

ROYAL MICROSCOPICAL SOCIETY, at 5.30.—Prof. L. C. Martin: "The Electron Microscope from the Optical Standpoint".

ROYAL METEOROLOGICAL SOCIETY, at 7.30.—Prof. E. J. Salisbury, F.R.S.: "Ecological Aspects of Meteorology" (Symons Memorial Lecture).

Thursday, April 20

LONDON MATHEMATICAL SOCIETY, at 5.—Discussion on "Mathematical Logic".

Friday, April 21

ROYAL INSTITUTION, at 9.—A. E. Dunstan: "The Utilization of Petroleum Gases".

Saturday, April 22

SOCIETY OF CHEMICAL INDUSTRY (FOOD GROUP) (at the London School of Hygiene and Tropical Medicine), at 10.30.—Conference on "Vitamin E" to be opened by W. A. S. Calder.*

APIS CLUB (at St. Bride's Institute), at 2.30—Annual General Meeting.

Dr. M. Hertz: "Discrimination of Patterns and Colour Vision in Bees".

SOCIETY OF CHEMICAL INDUSTRY (Chemical Engineering Group), April 20–21. Conference on "Safety in Chemical Works" to be held at the Royal School of Mines.

Appointments Vacant

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

ASSISTANT ENGINEERING MASTER in the Abertillery Mining and Technical Institute—The Director of Education, Higher Education Department, County Hall, Newport, Mon. (April 17).

SCIENTIFIC OFFICER (air defence) in the Directorate of Scientific Research, Air Ministry—The Under-Secretary of State, Air Ministry, S.2.D/B.8019, Berkeley Square House, London, W.1 (April 22. Quote B.191).

TECHNICAL OFFICER in the Meteorological Office—The Under-Secretary of State (S.2.B. (Met.)), Air Ministry, Aadastral House, Kingsway, London, W.C.2 (April 25).

Reports and other Publications

(not included in the monthly Books Supplement)

Great Britain and Ireland

University of London Institute of Education. Studies and Reports, No. 7: Some Aspects of Indian Education Past and Present. Being three Joseph Payne Lectures for 1935–6 delivered in the Institute (with Supplementary Memoranda) by Sir Philip Hartog. (Published for the Institute of Education.) Pp. xv+110. (London: Oxford University Press.) [213]

Other Countries

Advisory Committee on Education. Staff Study No. 6: The Extent of Equalization secured through State School Funds. By Newton Edwards and Herman G. Richey. Pp. viii+55. 15 cents. Staff Study No. 14: Educational Activities of the Works Progress Administration. By Doak S. Campbell, Frederick H. Bair and Oswald L. Harvey. Pp. xiv+185. 25 cents. (Washington, D.C.: Government Printing Office.) [203]

U.S. Department of the Interior: Office of Education. Pamphlet No. 85: Salary and Education of Rural School Personnel; Status and Trends. By W. H. Gaumnitz. Pp. 20. (Washington, D.C.: Government Printing Office.) 5 cents. [203]

Fifty-fifth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1937–1938. Pp. 8. (Washington, D.C.: Government Printing Office.) [203]

Survey of India. Professional Paper No. 29: Magnetic Anomalies. By B. L. Gulatee. Pp. vi+12+11 plates. (Dehra Dun: Survey of India.) 1.8 rupees; 2s. 6d. [203]

Bulletins of the Zoological Society of San Diego. No. 14: Studies of Reptile Life in the Arid Southwest. By L. M. Klauber. Pp. 100. (San Diego, Calif.: Zoological Society of San Diego.) [203]

Unione Astronomica Internazionale. Immagini spettroscopiche del bordo solare osservate a Catania, Madrid e Zurigo negli anni 1933 e 1934. Pp. ii+24 plates. (Arcetri: R. Osservatorio Astrofisico.) [203]