

## University Events

CAMBRIDGE.—The Gordon Wigan Prize in Chemistry for 1936 is divided equally between A. E. Alexander, of King's College, and T. P. Hughes, of Gonville and Caius College.

LONDON.—Prof. A. M. Carr-Saunders, Charles Booth professor of social science in the University of Liverpool, has been appointed director of the London School of Economics and Political Science as from October 1, in succession to Sir William Beveridge.

OXFORD.—E. J. Bowen, University College, and J. W. Wolfenden, Exeter College, have been appointed University demonstrators in chemistry for four years as from October 1. Dr. B. G. Maegraith, Exeter College, has been appointed University demonstrator in pathology for four years from May 1.

M. A. Jennings, Lady Margaret Hall, has been elected to the Schorstein research fellowship in medicine for 1937.

H. Field, New College, has been granted the degree of D.Sc. for his work in anthropology. Prof. J. C. Moir, Oriol College, has been given the degree of M.A. by decree.

The amount subscribed in the first three months to the University appeal for approximately a million pounds is £355,845.

## Societies and Academies

### Paris

Academy of Sciences, April 12 (*C.R.*, 204, 1093–1144).

LUCIEN CAYEUX : Signification of the disturbances recorded by the phosphates of Hodna (Algeria) during and after their deposit.

CHARLES MAURAIN : Possible influence of mechanical actions (vibrations) and magnetic disturbances on the earth's magnetic field, and its anomalies.

EMILE MATHIAS : Curvature of the diameter of densities.

JULIUS WOLFF : Invariant domains in conformal representation.

JOSEF L. KRAMES : A remarkable class of space movements. Symmetrical viration.

RENÉ DUGAS : Dirac's mechanics and the last multiplier in the sense of Jacobi.

ARCADIUS PIEKARA : The phenomenon of positive electrical saturation.

JULES FARINEAU : Spectrographic study of the conductivity electrons of magnesium and silicon.

MAURICE PARODI : Study of some borates and some oxides in the extreme infra-red.

JULES DUCHESNE : Calculation of the vibration frequencies of the molecule  $N_2O_4$ .

ANDRÉ GUINIER : An arrangement for obtaining very intense diffraction diagrams of crystalline powders with a monochromatic radiation.

ANDRÉ MERCIER : The theory of  $\beta$ -radioactivity.

JULES GUÉRON : The general trend of the evolution of aqueous solutions of ferric chloride.

MILLE MARGUERITE FROLLO : The petrographical study of the radiolarian complex of the Mesozoic formations of the Eastern Carpathians.

GABRIEL LUCAS : The Palæozoic of the Ghar Rouban region (Algero-Moroccan frontier).

EUGÈNE WEGMAN : Genesis of the alkaline rocks of Julianehaab (Greenland).

WILLIAM HENRI SCHOPFER : The nitrogen metabolism of a micro-organism, considered from the point of view of allometry.

ROBERT ECHEVIN : The influence of calcium carbonate on the growth of the radish.

MILLE MARIE THÉRÈSE GERTRUDE : The determinism of the morphogenic action exercised by the aquatic medium in plants.

HENRI GAUSSEN : The evolutionary equilibrium and the germinal influence in the Abietineae.

ANDRÉ TOURNADE and MARC CHEVILLOT : Concerning the Philippeaux-Vulpian experiment.

MAX LAFON : The biometrical study of cystine deficiency in the rat.

R. HERPIN : The periods of fixation of the animal organisms determining the fouling of ships' hulls.

### Rome

Royal National Academy of the Lincei (*Atti*, 24, 99–171; 1936).

E. SOLER : Geophysical work carried out by the Institute of Geodesy of the Royal University of Padua in the Vesuvian region in 1934–35.

A. RUSSO : Chondriome increment and activation of metabolism.

C. PAUC : Curvature in metrical spaces.

C. MINELLI : Continuous bent beam stressed axially, with a bending rigidity which is variable linearly along each span.

E. GUGINO : Trajectories of variational problems.

G. BERNARDINI and D. BOCCIARELLI : Energy and intensity of groups of neutrons emitted by  $Po+Be$  (2).

G. TEDESCHI : Causes of the evolution of oxygen from lead accumulators at rest.

L. MONTI : Oxidizing action of selenium dioxide (2).

G. CENTOLA : Researches on the process of stabilization of nitrocellulose.

R. SAVELLI : Some manifestations of the reducing power of vegetable tissues (1). Development and adaptation of some plastids (2).

G. CASALAINA : An electrochloroplast with a positive Ciaccio secretion.

A. AGOSTINI : Statistical studies on the variability of the goatsucker (*Caprimulgus e. europæus* L).

T. PERRI : Correlative processes of determination and of growth of the lens-forming rudiment in Amphibia (3). Experiments on *Bufo viridis*, *Bufo vulgaris*, *Rana agilis*, and *Rana esculenta*.

(*Atti*, 24, 175–238; 1936).

U. CISOTTI : Behaviour at the boundary of well-known analytical integrals.

L. TONELLI : Equations in the problems of Mayer.

U. MORIN : Ensemble of linear spaces contained in an algebraic hypersurface (1). Unirationality of the algebraic hypersurfaces of the fourth order (2).

B. SEGRE : Topological invariants relative to the united points of the regular transformations between



superposed varieties (1). A complement to the correspondence principle, for correspondences with zero valence on the algebraic curves (2).

R. L. GOMES: A correction of the note on the operator  $S$ —Schrödinger's operator.

G. B. BONINO and R. MANZONI-ANSIDEI: Raman spectrum of thiophene.

G. PICCARDI: Presence of molecular hydrogen in sunspots (1).

G. SCAGLIARINI and G. AVONI: Colour reaction between nitroprusside and glutathione.

M. FENOGLIO: Natural neutral and basic hydrated carbonates of magnesium.

C. LENTI: Osmotic pressure of the colloids of vitreous humour.

L. SANZO: Rearing of a pelagic larva of *Cerianthus* up to the stage of acquiring definite characteristics.

C. KOCH, B. SCHREIBER and G. SCHREIBER: Attempts to graft tissues in the vitreous humour of the guinea-pig's eye.

S. MINZ and E. SERIANNI: The action of adrenaline and of atropine on experimental alcoholæmia.

(*Atti*, 24, 239–313; 1936).

L. TONELLI: Equations in the problems of Lagrange.

G. A. MAGGI: Notable complement of Love's conditions (at the wave-front of a succession of electro-magnetic waves) and its applications.

B. SEGRE: A complement to the correspondence principle, for valency correspondences with united points of any multiplicity (2).

R. CACCIOPOLI: Inverted functional correspondences: general theory and applications to some non-linear functional equations and to Plateau's problem.

G. ARRIGHI: Dynamics of the deformable body with variable mass (1). Motion of a compressible fluid of variable mass with forces derived from a potential (2).

L. CESARI and F. CONFORTO: The equation of the three moments for a continuous bent beam stressed axially, with a bending rigidity which is variable linearly along each span.

M. MAGGINI: Attempts at photo-electric photometry of planetary surfaces.

E. SEGRÈ: Selector of velocity of slow neutrons.

G. PICCARDI: Presence of molecular hydrogen in sunspots (2).

G. B. BONINO: Molecular symmetry of thiophene (1).

G. SCAGLIARINI: Action of nitroprusside on pyrroles.

G. REVERBERI: 'Total' segmentation in the fragments of the fertilized egg of Ascidians.

C. JUCCI: Rearing of *Reticulitermes lucifugus* in sample tubes.

A. CAPPELLETTO: Development of the embryo in rarified air (1). Growth of tadpoles.

C. LENTI: Modifications of basal exchange in high mountainous regions.

#### Washington, D.C.

National Academy of Sciences, *Proc.*, 23, 133–187, March 15.

D. F. POULSON: Chromosomal deficiencies and the embryonic development of *Drosophila melanogaster*. By observation of living eggs, and by means of

sectioned material, it is concluded that sections of the X-chromosome are essential for certain specific processes in embryonic development. The larger the section missing, the earlier and more general are the effects.

C. W. METZ: Deficiencies and structural variations within the giant chromosomes in relation to the problem of gene structure. A review of recent investigations.

K. V. THIMANN and G. W. BEADLE: Development of eye colours in *Drosophila*: extraction of the diffusible substances concerned. Water extracts of wild-type larvæ, made in a nitrogen atmosphere, contain substances which, when injected into test larvæ, are capable of changing vermilion and cinnabar eye colour towards wild type. The substances are probably neither protein nor enzyme in nature.

G. W. BEADLE: Development of eye colours in *Drosophila*: fat bodies and Malpighian tubes as sources of diffusible substances. Extract of fat bodies is capable of affecting the eye colour of genetically vermilion flies; extract of Malpighian tubes has a similar effect on genetically cinnabar flies.

B. R. COONFIELD: The regeneration of plate rows in *Mnemiopsis leidyi* Agassiz. There are eight such rows in the body of this ctenophore, and rapid regeneration following natural or experimental injury takes place in the sequence healing, stretching of remaining parts of canal and concentration of mesogleal cells in the wound area, fusion of parts of canal and formation of plates above the new canal.

E. U. CONDON: Immersion of the Fourier transform in a continuous group of functional transformations.

H. WALLMAN: Lattices and bicomact spaces.

J. L. WALSH: Curvature of orthogonal trajectories of level curves of Green's function.

W. A. SETCHELL and N. L. GARDNER: *Iridophycus* in the northern hemisphere. Brief descriptions and a key are given.

H. C. YIN: Effect of auxin on *Chlorella vulgaris*. Measurement of individual cells after experiments lasting 2, 3 or 10 weeks showed that pure heteroauxin ( $\beta$ -indole-acetic acid) promotes cell enlargement in this alga as it does in higher plants. No conclusive effect on total growth was observed in cultures containing 0.001–0.01 mgm./c.c. of heteroauxin, and higher concentrations had injurious effects.

F. L. WHIPPLE and J. L. GREENSTEIN: Origin of interstellar radio disturbances. Jansky has observed continuous electromagnetic disturbances of wavelength 14.6 metres which appear to come from an extra-terrestrial source approximately coinciding with the galactic centre in Sagittarius. A theoretical investigation indicates that this radiation is unlikely to be caused by thermal agitation of charged particles in interstellar space.

I. ROUSE: New evidence pertaining to Puerto Rican prehistory. Three expeditions from the Peabody Museum have investigated Puerto Rica, the last in the summer of 1936. Evidence has been obtained of an early period when no pottery was used. The succeeding pottery period can be divided into three periods, Crab (painted), Intermediate (undecorated) and Shell (incised). A single people probably inhabited the region, gradually changing their pottery and food habits under the influence of neighbouring peoples.