

Societies and Academies.

LONDON.

British Mycological Society, March 17.—A. S. Horne and H. S. Williamson: The morphological and physiological characteristics of two new species of *Eidamia* were described and compared with those of *E. acremonioides*, the only species previously included in the genus. One species obtained from oak wood is strongly acidophile and causes coloration of the wood; the other, isolated from decaying apples, is capable of causing rot in Bramley's seedling apple when kept under ordinary storage conditions or at a constant temperature of 1°C.—M. H. Carré and A. S. Horne: Various fungi were grown in soluble pectin of a high degree of purity extracted from apples. Certain fungi utilise the pectin with production of acidity (*Botrytis*, *Diplodia cacaoicola*), others break it down completely with the production of sugar (*Eidamia* from apple), while some are apparently incapable of growth in pectin.—A. S. Horne and H. M. Judd: The *Eidamia* from apple grown in sugar solutions exhibits different reactions according to the sugar used, as evidenced by the odour (of coconut oil), liquid coloration, and rate of growth (on plates). The reactions appear to show a definite relation to the configuration of the sugars concerned.—H. S. Williamson: The species of *Eidamia* from oak caused the production of a yellow colour in seasoned wood. This colour was reproduced when normal oak was inoculated with conidia of the fungus, and was found to be partly due to the colour of the conidia and partly to a yellow refractive substance produced in the metabolism of the fungus and accumulated in some of the cells of the wood.—J. S. Bayliss Elliott and O. P. Stansfield: The life history of *Polythrincium Trifolii*. The Hyphomycete stage is followed by a pycnidial stage. After the pycnidial stage reaches maturity the clover leaves wither. It was found possible to obtain further development by placing the leaves between glass cover-slips placed between ivy leaves buried in soil in plant pots in the open. The perfect form is not a species of *Phyllachora* as has usually been supposed, but *Dothidella*.—J. Ramsbottom: The correspondence between M. J. Berkeley and C. E. Broome preserved in the National Herbarium covers a period of more than forty years, and gives a clear idea of the way in which the collaboration between the two was carried on. It contains a mass of biographical detail, particularly of Berkeley, and gives a much better picture of the "Father of British Mycology" than do the meagre and misleading biographies which have so far been published.—P. J. Alexander: The dates of appearance and habitats of the Mycetozoa of Surrey. No month is without a representative, and three-quarters of the British species have been recorded for the county.

Association of Economic Biologists, March 23.—Prof. E. B. Poulton, president, in the chair.—J. H. Priestley: The causal anatomy of the potato tuber. The potato haulm is angular with three leafy expansions rising from the angles; a primary endodermis in the underground stem disappears in the region where the leafy angles appear. The circular, un-winged stem formation is a result of growth in darkness. The formation of the tuber at the end of the stolon coincides with the disappearance of the endodermis and the appearance of cork in the epidermal or subepidermal layer. The increase of tissue in the tuber is due to the meristematic activity both in the cortex and in the periphery of the pith.

Earthing up potatoes may increase the stem area from which tuberiferous stolons may arise, and adequate moisture in spring with consequent vigorous root pressure may favour the formation of stolons; tubers may be expected to arise upon the stolons when the evaporation of water from the leaves exceeds water supply from the roots.—E. R. Speyer and O. Owen: The action of simple aromatic compounds on the cucumber woodlouse (*Armadillidium speyeri*, Jackson). Observations were made on the effects due to contact, vapour, and mixing with the soil at a concentration on M./100 in 250 gm. of soil; *p*-cresol and *p*-nitrophenol are less active than the corresponding ortho compounds, and both nitrophenols are less active than phenol. One part phenol in 750 parts soil is sufficient to kill all woodlice introduced during a period of 20 days, and this time corresponds with the disappearance of retardation in germination of tomato seeds sown in the same soil. Phenol and the cresols were the most active compounds tested; naphthalene disappears within 4 days of mixing with soil; thymol, camphor, hydroquinone, and α -naphthol act slowly.

Royal Microscopical Society (Industrial Applications Section), March 28.—Mr. J. Leonard Spicer in the chair.—S. R. Wycherley: Microscopy in the examination of manufactured paper. Paper is composed of disintegrated vegetable fibres, their length, strength, and breadth giving colour and durability. Linen fibres give the strongest and toughest of papers, and in their natural condition are tapered at the ends. The fibres have nodes which often burst, and then the fibres curl over and the hooks entangle one with the other, knitting together. Tested with Herzberg solution the result is brown coloration; with zinc chloride solution, claret coloration. Cotton fibres, the main constituent of high-class writing papers, are even and round with a number of twists along the whole length. Wood fibres are merely fibres of wood crushed or reduced to pulp: chemical wood-pulp fibres are always longer and cleaner than those of mechanical wood pulp. The fibres are distinguished by their bordered pits; they give a low-grade paper. Esparto fibres are long, thin, and smooth with a narrow canal, and there is always a residue of seed hairs. A microscope will often show whether the fibres have been too severely treated by the beaters, and also whether a heavy proportion of re-pulped paper has been used.—J. Strachan: The manufacture of papers for wrapping and containing food-stuffs. Legislation is required specifying the proper wrapping for particular foods. Papers for this purpose are classified as follows: Food-holders, such as the paper wrapper and the paper container; food-carriers, such as the box, the carton, and the fibre-board packing-case. The paper bag is used both as holder and carrier. The most important class of paper is that used in direct contact with the food-stuff. The basic paper for this should be a pure bleached cellulose, sterilised during the process of manufacture. Chemical and physical treatment of this base gives a variety of papers for specific purposes, such as the exclusion of colloids, moisture, and gases, or the retention of oily matter and flavours.—H. B. Wrighton: Objectives for metallurgy. The mounts should be of a metal which will resist the strongly acid atmosphere present in laboratories where analytical work on metals is carried out, and the front lenses should be protected against damage by accidental contact with metallic specimens. Glasses and cements used must be of a permanent character, as considerable heat is developed by the intense light used in the photomicrography of metal specimens. The most

suitable balance among the various optical corrections differs somewhat from the one generally accepted for the other branches of microscopy; in particular, flare should be reduced to the absolute minimum. The requirements of metallurgical microscopy are sufficiently distinct to justify the production of objectives computed and designed specially for this work.

PARIS.

Academy of Sciences, March 26.—M. G. Bigourdan in the chair.—R. de Forcrand: Thallium hydroxide. The usual method of preparing thallium hydroxide by precipitation of the sulphate with baryta is very tedious, and liable to give an impure product. A better method is to treat thallium ethylate, $C_2H_5 \cdot OTl$, with water and starting with $TlOH$ and Tl_2O prepared in this way, the thermochemical constants have been redetermined.—M. Soula: Taylor's series having an infinity of zero coefficients.—P. Noaillon: A harmonic function the gradient of which vanishes at infinity.—Henri Chrétien: Recording time, in figures, to the thousandth of a second, with an electrically maintained pendulum. A description, with illustrations, of a new recording chronograph of simple construction.—G. E. Beggs: The exact solution of problems indeterminate statically by means of paper models.—M. Lafay: The possible use of the microphone to facilitate problems of flight.—J. Trouset: Can the observation of the planets furnish arguments for or against relativity? The author gives reasons for answering this question in the negative.—Paul Mondain-Monval: The variation of heats of solution with temperature. Details of experiments on heats of solution of potassium, sodium, and ammonium nitrates, potassium sulphate, and ammonium and potassium chlorides at 0° and $18^\circ C$.—Th. Tommasina: Contribution to the dynamo-kinetic theory of the electron and the atom.—Georges Déjardin: The critical velocities of the electrons in krypton and the production of the spectra of this gas. An account of work done with a three electrode tube of an improved type. The ionisation potentials of argon and krypton were found to be 15.2 ± 0.2 volts and 12.7 ± 0.2 volts respectively: the double ionisation potentials were 34.0 volts and 28.25 volts. Krypton, like argon, gives two spectra, details of which are given.—Albert Portevin: The variations of capacity accompanying the thermal treatment of hollow steel bodies. Study of the influence of the tempering temperature, rate of cooling, and hardness of steel on the changes of capacity of steel shells.—L. J. Simon and M. Fréjacques: The methylating and sulphoning action of methyl sulphate on phenols in the absence of water. This reaction is very complicated. With phenol at least eight substances are present: methyl ether, anisol, phenol and anisol sulphonic acids and their methyl esters, and methylsulphuric acid. The methods of separation are given.—A. Mailhe: A new preparation of the tetrasubstituted ureas. The formamide of methyl-aniline, $C_6H_5 \cdot N(CH_3)(COH)$, passed as vapour over finely divided nickel at 380° – $400^\circ C$. gives symmetrical dimethyl-diphenylurea, $CO(N(CH_3)(C_6H_5))_2$. That the method is of general application is proved by other examples.—F. Bordas and T. Touplain: The denaturation of ethyl alcohol. The use of alcohol as a constituent of a motor fuel requires a cheaper denaturant, and one easily detected. The use of methyl or ethyl borate is suggested.—P. Gaubert: The liquid crystals of anisal-*p*-amido-azotoluene. A reply to some criticisms of G. Friedel.—M. Solignac: The tectonic of the plain of Mateur and its approaches (Tunis).—F. Baldet: Contribution

to the study of atmospherics. A method of searching for and partially eliminating low frequency parasitic currents of atmospheric or telluric origin.—Pierre Dangeard: The vacuome in the pollen grains of Gymnosperms. Application of the vital coloration method (neutral red) to the study of the pollen grains of *Taxus baccata*, *Cephalotaxus Fortunei*, *Cupressus Lawsonia*, and *Pinus Armandi*.—Mlle. France Gueylard: Intervention of the spleen in the phenomena of adaptation to changes in salinity. It is known that *Gasterosteus aculeatus* can be transferred from fresh to salt water, and rapidly adapts itself to the change of medium. It is shown that change in the salinity of the medium results in changes in the spleen, the higher the proportion of salt in the water, the greater the reduction in the proportional weight of the spleen.—Marcel Duval and P. Portier: The impermeability to urea of certain tissues of selacian fishes.—Jules Amar: The law of vivireaction in biology and pathology. This law is stated thus: any pathological or physico-chemical act which tends to reduce the phenomena of organic oxidation provokes, by a defence mechanism, a relative increase of the pulmonary ventilation.—L. M. Betances: The specific differentiation of the hematic cell in the Metazoa.—André Lwoff: The nutrition of the Infusoria. Although, under natural conditions, the nutrition of free infusoria is purely phagocytic, it is possible, in a suitable medium, to feed some species by means of dissolved substances.—Boris Ephrussi and André Lwoff: The double cyclic periodicity of the zone of division in *Colpidium colpoda*.

WASHINGTON.

National Academy of Sciences (Proc. Vol. 9, No. 1, January).—H. W. Brinkmann: On Riemann spaces conformal to Euclidean space. An n -dimensional Riemann space can be "imbedded" in an $(n+2)$ -dimensional Euclidean space.—O. Veblen: Equiaffine geometry of paths. A definition of volume which generalises that used in Riemann geometry is derived.—L. P. Eisenhart: Affine geometries of paths possessing an invariant integral.—J. R. Kline: Closed connected sets which are disconnected by the removal of a finite number of points.—R. S. Woodward: Some extensions in the mathematics of hydromechanics. A development of some of the equations used to describe fluid motion when viscosity is taken into account.—P. D. McMaster and P. Rous: Hydrohepatosis, a condition analogous to hydronephrosis. Prolonged obstruction of the bile duct in dogs causes distention of the duct and of the gall-bladder with "white-bile," a colourless, watery fluid. A pressure obstacle causes reduction in total secretion and in the percentage output of some of the substances secreted, as in kidney obstruction, though the distention caused is less marked.—H. Laugier and R. Legendre: Novocaine and curarisation. Novocaine causes morphological changes in nerve fibre, and a solution (1 in 10,000) in physiological salt solution causes an increase in the intensity of a suddenly established current necessary to provoke visible muscular contraction, and decreases the interval before response occurs.—F. G. Benedict and E. G. Ritzman: Under-nutrition and its influence on the metabolic plane of steers. Eleven adult steers were fed for about $4\frac{1}{2}$ months on one-half their original maintenance ration. Changes in body tissue were measured by the carbon dioxide output, using a respiration chamber. At first there was rapid reduction in live-weight, due to changes in intestinal ballast or fill; afterwards there was slow steady loss, due to drafts on body material; and

during the last few weeks the weights were practically constant. The animals remained active, but the pulse dropped from 44 to about 28. Maintenance level of metabolism in control beasts was 2150 calories per 24 hours per square metre of body surface; for the underfed animals it was 1475. On refeeding, the animals rapidly regained weight and were readily fattened. The energy value of the faeces remained practically constant at 4.778 calories per gm. of water-free substance under all feeding conditions.—C. G. Darwin: A quantum theory of optical dispersion (see NATURE, December 23, 1922, p. 841).—W. H. Cole: Circus movements of *Limulus*. The animals were subjected to diffuse and non-directive illumination, and only one lateral eye was allowed to function. In accordance with Loeb's tropism theory, the diameter of the circles traced out was inversely proportional to the intensity of the light.

(Proc. Vol. 9, No. 2, February).—R. W. G. Wyckoff: On the hypothesis of constant atomic radii. Starting from caesium dichloro-iodide, values have been calculated for the "spheres of influence" or atomic radii of several atoms. These values are compared with the corresponding observed interatomic distances. Many discrepancies occur, showing that it is not in accord with experiment to assign a definite size to each atom. In some groups of isomorphous compounds composed of two kinds of atoms a law of constant atomic radii appears to hold. In compounds of different crystal structure, in which the manner of arrangement of the atoms of one kind about those of another (atomic environment) is different, the interatomic distances are unlike.—A. Van Maanen: Photographic determination of parallaxes with the 100-inch reflector (Mount Wilson). Four fields have been measured, including the helical nebula (N.G.C. 7293). Using the parallax derived, +0.058, the object appears to have a diameter 375 times that of the solar system.—H. Shapley: Light and colour variations of Nova Aquilæ 1918.4. The nova was a star (10-11 mag.) at least 30 years before its discovery. Rise in brightness began on June 7, 1918, reached a maximum, at visual magnitude -1.2, in two days, when it was brighter than any star in the sky except Sirius, and decreased four magnitudes by June 25. Semi-periodic fluctuations occurred until October, with decreasing brightness, and since then it has continued to decrease until it is now about magnitude 10.—E. H. Hall: A theory of the Hall effect and the related effect for several metals. When a magnetic field acts at right angles to a current flowing along a thin strip of metal, the equipotential lines are no longer at right angles to the line of flow (Hall effect) and a transverse temperature gradient is set up (Ettingshausen effect). Analogous effects are obtained if heat is flowing along the strip. The explanation offered assumes that conduction implies the existence of two streams, one of free electrons and the other of associated electrons, which oppose each other.—F. B. Sumner: Studies of sub-specific hybrids in *Peromyscus*. Three different crosses between geographic races of deer mice were studied in respect of 17 quantitative characters. The mean values for any character in the hybrid is usually between the parental values. Means for the two hybrid generations (F_1 and F_2) generally agree. There appears to be a tendency towards increase of variability which is not due to environmental factors. Most of the elements of the total sub-specific complex seem independent of each other in inheritance, and no single character behaves in obvious Mendelian fashion.—G. A. Miller: Sets of conjugate cycles of a substitution group.—A. Carrel:

Leucocytic secretions. Evidence was obtained of the production of substances promoting growth of homologous fibroblasts and destroying foreign erythrocytes, both *in vitro* and *in vivo*. This supports Renaut's view that the function of the white corpuscles of the blood is to bring nutritive substances to the fixed cells of the tissues, and it also appears that they can bring regenerative substances to injured adult tissue. A foreign protein added to leucocytic cultures increases the production of growth-activating substances; *in vivo* this may precede the production of anti-bodies.—W. M. Davis: Drowned coral reefs south of Japan. Some of the Riu Kiu and Bonin Islands are on the margin of the coral seas of to-day; they have no regular sea-level reefs, though their shore-lines resemble those of the embayed islands of the coral seas. The islands may have been protected by reefs while suffering erosion during a period of greater emergence followed by relatively slow submergence. Continued upward growth of the protecting reefs has possibly been inhibited by decrease of ocean surface temperature. A temperature high enough for the growth of the suggested coral reefs may have been caused by the deflexion of the North Equatorial current of the Pacific when the ocean surface was lowered during the Glacial epochs.

CALCUTTA.

Asiatic Society of Bengal, March 7.—Lily Strickland-Anderson: Music and the Hindu Pantheon. An attempt to apply the principle that Hindu mythology represents a kinetic or fluidic and not a static or concrete mode of thinking, to the Hindu Pantheon, specially relating to music.—K. G. Sinha: On some Maithili dramas of the seventeenth and eighteenth centuries. An attempt is made to explain the nature and importance of the dramas as throwing light on the development of Mithilā art and culture.—C. V. Raman: (1) A theory of the viscosity of liquids. An attempt is made to calculate the viscosity of liquids theoretically on the basis of the molecular hypothesis. (2) The molecular anisotropy of liquids. The optical anisotropy of the molecules evidenced by experiments on the scattering of light is discussed, and an attempt is made to find how the molecules influence each other's position and orientation.—N. Annandale: Bivalve molluscs injuring brickwork in the Calcutta docks. A note on injury done to brickwork by the boring mollusc *Martesia fluminalis* and on other molluscs associated with it.—P. Brühl and K. Biswas: On a new species of *Cylindrospermum* from Bengal. Description of a new species, *Cylindrospermum doryphorum*, sp. nova, Brühl et Biswas. Comparison with known species.—L. Dudley Stamp and L. Lord: A preliminary note on the ecology of part of the riverine tract of Burma. The area dealt with embraces a zone of country on either bank of the Irrawaddy river between Prome and Yenangyaung, which covers more than 4000 square miles. The inter-relationships existing between the geological formations, soils, climate, and the distribution of the vegetation are traced in detail. The plant formations are classified into 13 groups and the investigation revealed that climate, especially rainfall, is really the main determining factor in the development of any particular type of vegetation within this region.—S. L. Hora: Zoological results of a tour in the Far East. (Fish, Part I.) The first part of a report on a collection of fish from a maritime lagoon connected with the Gulf of Siam which contains water of very variable salinity. Forty-eight species of the Selachii and of seven teleostean orders

are discussed. A new species of pipe-fish, and one of Mastacembelus, are described and also a new colour form of *M. armatus*.—B. Prasad: Revision of Kobelt's nomenclature of the Indian Ampullariidæ.

Official Publications Received.

South Australia: Department of Mines. Mining Review for the Half-Year ended 30th June 1922. Compiled by Lionel C. E. Gee. Pp. 64. (Adelaide.)

South Australia. Annual Report of the Director of Mines and Government Geologist for 1921. Pp. 10+2 maps. (Adelaide.)

The Carnegie United Kingdom Trust. Ninth Annual Report (for the Year ending 31st December 1922) submitted by the Executive Committee to the Trustees on Friday, 9th March 1923. Pp. xii+63. (Edinburgh.)

The Journal of the Royal Anthropological Institute of Great Britain and Ireland. Vol. 52, July to December 1922. Pp. vi.+151-324+12. (London: Royal Anthropological Institute.) 15s. net.

Ministry of Public Works, Egypt. Report on the Work of the Physical Department for the Year ending 31st March 1922. By Dr. H. E. Hurst. Pp. 22. (Cairo: Government Printing Office.) P.T. 5.

Regenwaarnemingen in Nederlandsch-Indië. Twee en Veertigste Jaargang, 1920. Pp. vi+123. Drie en Veertigste Jaargang, 1921. Pp. iii+123. (Wetvevreden, Java: Landsdrukkerij.)

Annual Reports: The Academy of Natural Sciences of Philadelphia for the Year ending 30th November 1921. Pp. 74. (Philadelphia.)

Proceedings of the Academy of Natural Sciences of Philadelphia. Vol. 74, 1922. Pp. iii+313+22 plates. (Philadelphia.)

Annals of the Missouri Botanical Garden. Vol. 9, No. 3, September. Pp. 233-332. (St. Louis, Mo.) 1 dollar.

Library of Congress. Report of the Librarian of Congress and Report of the Superintendent of the Library Building and Grounds for the Fiscal Year ending 30th June 1922. Pp. 209. (Washington: Government Printing Office.) 50 cents.

Diary of Societies.

MONDAY, APRIL 23.

VICTORIA INSTITUTE (at Central Buildings, Westminster), at 4.30.—Dr. D. Anderson-Berry: Occultism: at the Bar of Philosophy and Religion.

ROYAL SOCIETY OF MEDICINE (General Meeting), at 5.—Sir Archibald Garrod, Dr. F. J. Poynton, Dr. M. Cassidy, and Dr. A. F. Hurst: Discussion on the Ætiology and Treatment of Osteo-arthritis and Rheumatoid Arthritis.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Prof. Shattock: Syphilis.

INSTITUTION OF MECHANICAL ENGINEERS (London Graduates' Section), at 7.—S. H. G. Warne: Recent Steam-Wagon Progress, and a Suggested Design.

INSTITUTION OF ELECTRICAL ENGINEERS (Informal Meeting), at 7.—E. H. Shaughnessy and others: Discussion on Practical Broadcasting.

ROYAL INSTITUTE OF BRITISH ARCHITECTS, at 8.—W. G. Newton: The Literature of Architecture.

ROYAL SOCIETY OF ARTS, at 8.—E. Kilburn Scott: Nitrates from Air (3). (Cantor Lectures.)

FARADAY SOCIETY (at Chemical Society), at 8.—J. H. Shaxby and J. C. Evans: The Properties of Powders—The Variation of Pressure with Depth in Columns of Powders.—E. E. Walker: The Properties of Powders. Part VI. The Compressibility of Powders. Part VII. The Distribution of Densities in Columns of Compressed Powder.—E. K. Rideal: The Rate of Hydrogenation of Cinnamic and Phenylpropionic Acids.—A. Tafel: The Temperature of Maximum Density of Aqueous Solutions.—L. Anderson: Note on the Coagulation of Milk by Acid.

ROYAL SOCIETY OF MEDICINE (Odontology Section), at 8.—Dr. C. F. Sonntag: Some Points in the Comparative Anatomy of the Mouth and Tongue.—G. J. Harborow: A Case of Unerrupted Incisors and Canines in a Male aged 59.—E. Sprawson: The Vascular Supply of the Enamel Organ of *Felis domestica*.

ROYAL GEOGRAPHICAL SOCIETY (at Æolian Hall), at 8.30.—L. M. D. Buxton: Inner Mongolia.

TUESDAY, APRIL 24.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Sir Arthur Keith: The Machinery of Human Evolution (3). How New Features are Gained.

ROYAL SOCIETY OF MEDICINE (Medicine Section), at 5.30.—Dr. C. Gouldsbrough: Osteo-arthritis of the Spine.—Dr. H. L. Tidy: Glandular Fever and Infective Mononucleosis.

ZOOLOGICAL SOCIETY OF LONDON, at 5.30.—R. B. Murray: Exhibition of a Giant Centipede from Trinidad, and Mounted Skins of Oil-birds.—Lt. Col. S. Monckton Copeman and Major E. E. Austen: Exhibition (with photographs) of a unique British Dipteron, taken on Primrose Hill.—Baron F. Nopsca: The Origin of Flight in Birds.—E. C. Stuart Baker: Cuckoos' Eggs and Evolution.

INSTITUTION OF CIVIL ENGINEERS, at 6.—Annual General Meeting.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Scientific and Technical Group), at 7.—Capt. J. W. Bamfylde: Photomicrography as applied to the Iron-Carbon.

WEDNESDAY, APRIL 25.

ROYAL SOCIETY OF ARTS, at 4.30.—Conference on the Milk Question.—Papers: Prof. R. S. Williams: The Arguments for maintaining an Open

Market for Fresh Milk.—Prof. J. C. Drummond: Changes in the Digestibility and Nutritive Value of Milk induced by Heating.—Dr. S. S. Zilva: The Effect of Heat on some Physiological Principles in Milk.—Capt. J. Golding and Mrs. A. T. R. Matfick: A Demonstration of some of the Chemical Changes in Milk on Heating to various Temperatures.

ROYAL MICROSCOPICAL SOCIETY (Industrial Applications Section), at 7.—C. Baker: Junior Engineer Metallurgical Microscope and the Greenough Binocular Microscope.—R. and J. Beck, Ltd.: New Research Outfit for Metallurgical Work, including Microscope, Camera, Optical Bench, etc.—Edison Swan Electric Co., Ltd.: Projector and Fulloilite Lamps.—M. P. Swift: Use of Dichroscopes for the Identification of certain Gem Stones.—W. Watson and Sons, Ltd.: Petrological Microscopes.—At 8.—J. E. Barnard: The Manipulation of the Microscope in Industrial Laboratories. Part I. Illuminants and Illumination.—Dr. M. C. Stopes: The Microscopical Examination of Coal in relation to Fuel Economy and Efficiency.

BRITISH PSYCHOLOGICAL SOCIETY (Medical and Education Sections) (at London Day Training College), at 8.—Drs. East, Burt, Shrubbsall, and Stoddart: Symposium on Delinquency and Mental Defect, to be followed by a discussion.

THURSDAY, APRIL 26.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. J. T. MacGregor-Morris: Modern Electric Lamps (1). Glowing Solids *in vacuo* (Tungsten Lamps).

ROYAL SOCIETY, at 4.30.—Prof. T. R. Merton and R. C. Johnson: Spectra associated with Carbon.—R. A. Watson Watt and Dr. E. V. Appleton: The Nature of Atmospheres.—Prof. W. A. Bone, D. M. Newitt, and D. T. A. Townend: Gaseous Combustion at High Pressures. Part III. The Energy-absorbing Function and Activation of Nitrogen in the Combustion of Carbon Monoxide.—Dr. I. Masson and L. G. F. Dolley: The Pressures of Gaseous Mixtures.—W. R. Bousfield and C. Elspeth Bousfield: Vapour Pressure and Density of Sodium Chloride Solutions.—Prof. F. A. Lindemann and G. M. B. Dobson: A Note on the Temperature of the Air at Great Heights.—Prof. G. H. Hardy and J. E. Littlewood: Lindelöf's Hypothesis concerning the Riemann Zeta-function.

LONDON MATHEMATICAL SOCIETY (at Royal Astronomical Society), at 5.—Grace Chisholm Young: The Solution of a Pair of Diophantine Equations connected with the Nuptial Number of Plato.—H. W. Richmond: (1) The Electrostatic Field of a Plane Grating with Thick Rounded Bars; (2) Notes on the use of the Schwarz-Christoffel Transformation in Electrostatics.—E. G. C. Poole: The Discontinuous Motion produced in an Infinite Stream by Two Plane Obstacles.—A. E. Ingham: Two Mean Value Theorems concerning Riemann's Zeta-function.—A. E. Jolliffe: The Inflections of the Non-singular Plane Quartic.—R. Vaidynathaswami: Transversal Problems in Hyperspace.—T. Stuart: Certain Diophantine Equations.—M. Riesz: Sur l'équivalence des certaines méthodes de sommation.—K. Basu: The Perturbations of the Orbit of the Valency-electron in the Generalised Hydrogen-unlike Atom.—Pandit Oudh Upadhyaya: Cyclotomic Heptasection.

CHILD-STUDY SOCIETY (at Royal Sanitary Institute), at 5.30.—Annual General Meeting.—At 6.—Dr. W. G. Sleight: Children's Taste in Pictures.

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—L. Breach and H. Midgley: The Drive of Power Station Auxiliaries.

SOCIETY OF DYERS AND COLOURISTS (London Section) (at Dyers' Hall, Dowgate Hill), at 7.—L. G. Lawrie: Fur Dyeing.

ROYAL SOCIETY OF MEDICINE (Urology Section), at 8.30.—Clinical and Pathological Evening.

FRIDAY, APRIL 27.

ASSOCIATION OF ECONOMIC BIOLOGISTS (in Botany Theatre, Imperial College of Science and Technology), at 2.30.—Dr. C. M. Wenyon: Some Recent Observations on Pathogenic Protozoa of Plants and Animals.—(To be followed by a discussion.)

ROYAL SOCIETY OF MEDICINE (Study of Disease in Children Section), at 5.—(Epidemiology and State Medicine Section), at 8.—Dr. T. F. Dewar: The Incidence of Venereal Disease in Scotland.

PHYSICAL SOCIETY OF LONDON (at Imperial College of Science and Technology), at 5.—The Research Staff, General Electric Co., Ltd.: The Analysis of Bubbles in Glass.—Dr. H. P. Waran: A Simple Regenerative Vacuum Device, and some of its Applications.—Capt. H. Shaw and E. Lancaster Jones: Application of the Eötvös Torsion Balance to the Investigation of Local Gravitational Fields.—L. F. Richardson: Demonstration of an Electromagnetic Inductor.—Dr. F. Ll. Hopwood: Demonstration of Experiment Illustrating Time-Lag in Vision.

ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Sir Arthur Keith: Surgical Anatomy of the Foot.

INSTITUTION OF MECHANICAL ENGINEERS (Informal Meeting), at 7.—Adjourned Discussion on paper by A. E. L. Chorlton: The Use of Light Alloys in place of Iron and Steel.

JUNIOR INSTITUTION OF ENGINEERS, at 7.30.—J. Feard: Stock Control.

ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN, at 8.—A. Watkins: Early British Trackways.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Prof. C. V. Boys: Measurement of the Heating Value of Gas.

SATURDAY, APRIL 28.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. L. L. B. Williams: The Physical and Physiological Foundations of Character (1).

PUBLIC LECTURE.

WEDNESDAY, APRIL 25.

KING'S COLLEGE, at 5.30.—The late Prof. E. Troeltsch (by Dr. E. Barker): Ethics and the Philosophy of History. (Succeeding lectures on May 2 and 9.)