

## Societies and Academies.

LONDON.

**Royal Society**, May 20.—A. V. Hill: The laws of muscular motion (Croonian lecture). In all kinds of contractile tissues there are certain similar, or analogous, processes; so that in discussing properties of striated muscle we are really dealing with very general phenomena. Recent work on the chemical reactions of breakdown and recovery, and the rôle of glycogen, lactic acid and phosphate was discussed. If physiological response of muscle undergoing stretch be less than that of muscle allowed to shorten, why is the tension at any given length so much greater during stretch than during shortening? The answer provides an important clue to the nature of the contractile process. Re-development of contraction after quick release was discussed, and also the 'viscous-elastic' model.

**Society of Public Analysts**, May 18.—A. Chaston Chapman: The detection and determination of glycerin in tobacco. The tobacco is mixed with sodium sulphate (to absorb moisture) and extracted with acetone. The residue from the extract is freed from resins, and its glycerol content determined by a modification of Zeisel's silver iodide method. For a qualitative test the glycerin is separated by extraction and distillation.—Harold Toms: The crystalline bromides of linseed and some other oils. The most insoluble bromide of linseed oil, as crystallised from ethyl acetate, is not an ethyl ester, but a glyceride. When hydrolysed with hydrobromic acid it yields, as its only recognisable product, hexabromostearic acid, but this does not prove the absence of tetrabromostearic acid, which is converted by hydrobromic acid into a sticky derivative. The insoluble bromides of perilla, candlenut and para rubber seed oils are identical with the linseed oil bromide. Tetralin is a better solvent than ethyl acetate for crystallising oil bromides.—A. Bakke and Paula Henegger: The polarimetric determination of sucrose in condensed milk. A modification of the method of Revis and Payne is used, employing mercuric nitrate both as precipitant and as inverting agent. Results agreeing with the gravimetric results were obtained in the winter months, but there was a discrepancy in summer due to such causes as altered period of lactation, period of fresh grass feed, etc., on the original milk.—W. R. Schoeller: The separation of iridium from iron. The method used is based on the precipitation of ammonium chloroiridate  $(\text{NH}_4)_2\text{IrCl}_6$ ; allowance is made for the amount of iron adsorbed by the ammonium chloride precipitate.—H. L. Smith and J. H. Cooke: The determination of very small quantities of iron. A colorimetric method has been devised in which the sensitiveness of the thiocyanate reaction is very greatly increased. Zinc interferes, and for determining iron in zinc compounds the iron thiocyanite is extracted with a suitable solvent, such as a mixture of amyl alcohol and ether, and the colour of the extract matched.—J. N. Rakshit: The determination of total alkaloids, sugar, and oily substances in opium. The alkaloids in an aqueous extract of opium and those remaining in admixture with the opium wax are determined. For the determination of sugar, titration with Fehling's solution after removal of alkaloids gives fairly concordant results. Added oil or wax is indicated by a saponification value differing from that of opium wax, and is approximately determined by the appearance of the opium when heated on a plate over steam.

**Royal Meteorological Society**, May 19.—E. S. Player: Meteorological conditions and sound transmission. (i.) Sounds originating on the surface. Observations were made near the North Foreland, Kent, the sources of sound being the sirens of the light-vessels in the locality. Note-frequency of the sirens did not vary, and, the light-vessels being stationary, distances and bearings remained constant. Examples were met of rapid and continual changes over very short periods in sound intensity, and the effects of humidity, temperature, rain, and the general combination of conditions, were examined. (ii.) Sounds arriving from an altitude. The sources used were aeroplane notes which vary in frequency and obviously occupy positions which are continually changing. Observations of upper-air conditions showed a practically constant fall in temperature, but strata of varying relative humidity. Sound was transmitted well when the variations of these strata were small, and the atmosphere, therefore, more nearly approached a homogeneous state; great or abrupt changes had a destructive effect. Acoustical conditions were often good for surface sounds, while bad for sounds transmitted from an altitude, and vice versa.—J. Glasspoole: The wet summer of 1924 and other wet seasons in the British Isles. Maps are given of the rainfall (as a percentage of the normal) of this and other wet seasons over the British Isles since 1870, of from three to seven months' duration. Seventeen such periods are recorded. A comparison of the maps with those for dry periods indicates that while large deficiencies are confined mainly to the south and east of the British Isles, large excesses do occur in the north and west.—C. E. P. Brooks: Pressure distributions associated with wet seasons in the British Isles. The average pressure distribution over the northern hemisphere during each of the wet periods enumerated above from 1876 to 1924, represented as deviations from normal, fall into two clearly defined types: (a) Greatest deficit of pressure over Iceland; (b) greatest deficit of pressure over the British Isles. With a pressure distribution of type (a) the S.W. winds over the British Isles would be stronger than normal, giving more orographic rain on the western highlands, and in the four periods classed as of this type, the rainfall distribution was found to be mainly orographic. With a pressure distribution of type (b) there would be a tendency for depressions to pass directly across the British Islands, giving an excess of rainfall over the whole country (cyclonic type), and with the exception of April-June 1907, all the periods with a pressure distribution of type (b) had this type of rainfall distribution. The conditions in the Atlantic Ocean during and preceding these wet periods were then investigated. (1) Favourable to a wet period of the mainly orographic type: N.E. trade wind velocity below normal nine to twelve months before; S.E. trade wind velocity below normal twelve months before; pressure difference, Sydney (Nova Scotia) minus Ivigtut (Greenland) above normal three months before; amount of ice near Iceland below normal during the wet period. (2) Favourable to a wet period of the mainly cyclonic type: Pressure difference, Sydney minus Ivigtut, above normal three months before; amount of ice near Iceland above normal in preceding spring, but below normal during the wet period. The weak N.E. and S.E. trades and the large pressure difference between Sydney and Ivigtut all contribute to a lower temperature in the North Atlantic, which may thus be the chief cause of a wet season in the British Isles. The part played by the Iceland ice is probably to determine the location of the greatest deficit of pressure.



## MANCHESTER.

**Literary and Philosophical Society, May 11.**—John Walton: (1) On some Australian fossil plants referable to the genus *Leptophloeum*, Dawson. The paper deals with the genus *Leptophloeum*, Dawson, instituted in 1862 for a fossil stem of Lycopod affinities from the Upper Devonian of Maine, U.S.A. The importance of some of the features exhibited by the type specimen was stressed, particularly in connexion with the relation between this fossil and the Australian fossils which have been referred to *Lepidodendron australe* or *Leptophloeum australe*. Some hitherto undescribed features of the Australian plants were described. (2) A note on the structure of the plant-cuticles in the paper coal from Toula in Central Russia. These cuticles have been referred to *Bothrodendron* by some authors, and to *Lepidodendron* by others. In some specimens the presence of the cuticle of the ligular pit can be demonstrated. The evidence for referring these fossils either to one or the other of the two genera is of a conflicting nature, but on the whole it seems in favour of *Bothrodendron*. There is considerable difficulty in distinguishing between the smaller vegetative branches of *Lepidodendron* and *Bothrodendron*.

## PARIS.

**Academy of Sciences, April 26.**—Maurice Hamy: A particular case of the diffraction of solar images.—André Blondel: The modulation of transmitting stations with valves fed with continuous current.—S. Winogradsky: Spontaneous cultures of (nitrogen) fixing micro-organisms. A study of the substances favourable to the growth of *Azobacter* in earth cultures.—Charles Nicolle, E. Conseil and P. Durand: The agent of scarlet fever. The authors' experiments confirm the views of Dick, that scarlet fever is due to a *Streptococcus*, and can be prevented by a vaccine.—Axel Egnell: Curvature and divergence.—A. Demoulin: Conformal geometry of surfaces and of triple orthogonal systems.—F. P. Bessonoff: Nearly periodic functions with one complex variable, defined in the whole of a plane.—Paul Le Rolland: The measurement of hardness by the pendulum. A claim for priority in the use of the pendulum for measuring hardness of metals.—Eugène Barré: The theory of mine craters.—T. V. Jonescu: The variations of intensity of the thermionic current when the distance between the filament and the anode is changed.—Léon and Eugène Bloch: A second spark spectrum of iron. A comparison of the arc and spark spectra of iron between the wave-lengths 2300 and 1850 Å.U. shows that the arc spectrum and condensed spark spectrum are clearly different, and to such an extent that it is difficult to find in one the lines characteristic of the other.—E. Dureuil: The use of magnesium as electrode supports in spectrum analysis. Magnesium as a support in spectrum analysis has certain advantages over the materials commonly used. In the region between 7000 Å.U. and 3500 Å.U. there are only about a dozen strong lines and these do not interfere. Magnesium electrodes can be used for the production of either arc or spark spectra.—René Lucas: The rotatory power of camphor. Experiments giving the rotatory power of camphor for different wave-lengths in sulphuric and phosphoric acid solutions, and a discussion of some criticisms of Louis Longchambon.—G. Bruhat and M. Pauthenier: The rotatory power in the ultra-violet of tartaric acid in dilute solution. Details of experiments are given which show clearly the existence of a dispersion anomaly, with a change of sign in the ultra-violet, even for solutions containing 0.25 per

cent. of tartaric acid.—Pierre Jolibois, Henri Lefebvre and Pierre Montagne: The decomposition of carbon dioxide under reduced pressure by the condensed spark. When the circuit is formed with a conductor of negligible self-induction, removed as far as possible from the decomposition tube except in the neighbourhood of the connexions, the dissociation reaches a limiting value of about 90 per cent. and the yield in chemical energy of the first spark is of the order of 20 per cent., the remainder of the energy of the spark being degraded in the form of radiation.—Mlle. Suzanne Veil: The decomposition of hydrogen peroxide in the presence of certain hydroxides in suspension. During the decomposition of hydrogen peroxide by the hydroxides of nickel, iron and chromium in suspension, the chemical phenomena correspond with a magnetic variation of the solid phase. The term 'magneto-chemical' is suggested for such reactions.—L. Abonnenc: Drops formed in an electric field. Drops forming at the end of a cylindrical tube are generally reduced in weight when placed in an electric field. It is shown that the viscosity of the fluid remains unchanged.—A. Demay: The structure of the crystalline massif of Mont Pilat, near Saint-Etienne.—P. Russo: The presence of quaternary glacial deposits in the eastern Riff.—P. Mougín: The periodicity of glacier increase.—J. Thoulet: The region of active submarine volcanoes of the Hawaii Islands in the north Pacific.—Theodor: The formation of the chromoplasts in the *Phanogams*.—Mlle. Eudoxie Bachrach: The effects of the intoxication of the lactic bacillus by potassium chloride at different temperatures. Under the prolonged influence of a mineral poison it is known that the lactic bacillus undergoes one of two modifications: either it becomes accustomed to the poison or becomes sensitised. It is now shown that according to the temperature at which the strains are cultivated in the toxic medium, either modification can be obtained at will.—A. Paillot and R. Noel: The origin of the albumenoid inclusions of the adipose body of insects.—Raymond-Hamet: A new method of physiological titration of preparations of ergot.—J. Gautrelet, R. Bary and Mme. Vechiu: The action of chloralose on the nervous system.—Maurice Piettre: The acetone method permitting the localisation in the serum albumen of the hæmolysine of a hæmolytic immunoserum.—J. Sabrazes: The Spirochætes of typhoid and paratyphoid excreta; their possible agglutinability by the blood of the carrier; their presence in peritonitis by perforation.—Georges Blanc and Jean Caminopetros: Some experiments on anthrax infection. Experiments are described showing that the skin is not the only part sensible to anthrax infection, the central nervous system being much more receptive.—Marage: The influence of the dose of a drug on the defence of the organism.

## ROME.

**Royal Academy of the Lincei, March 21.**—Umberto Cisotti: The electrostatic field due to any number of thin electrified conductors of cylindrical form and with parallel axes.—Giovanni Lampariello: Continuous surfaces which assume finite area.—Orazio Lazzarino: Generalisation of Joukovsky's formula on the motion by inertia of a semi-rigid gyroscope.—Guérard des Lauriers: Dini's problem.—A. Kolmogoroff and G. Seliverstoff: The convergence of Fourier's series.—Bianca Nannei: Immediate effects and hereditary effects in the torsion of a bismuth wire.—Paolo Straneo: Physical bases for an extension of the theory of hereditary phenomena.—A. Proviero: The use of damping in seismographs. The use of



damping in seismographs is unnecessary and, although a damped apparatus gives trustworthy values of the term  $\mu^2$ , it is almost replaceable by a single non-damped apparatus and is certainly of less advantage than two non-synchronous seismographs.—Adolfo Ferrari: The crystalline structure of the fluorides of certain divalent metals. The anhydrous fluorides,  $\text{FeF}_2$ ,  $\text{CoF}_2$ ,  $\text{NiF}_2$ , and  $\text{ZnF}_2$ , exhibit the same tetragonal crystalline lattice, which is of the 'rutile' type.—V. Caglioti: A new example of anomalous mixed crystals.—P. Comucci: Notes on wulfenit and vanadinite from Oudida (Morocco).—Cramela Ruiz: Barytes from the Giona mine (Racalmuto).—Enoch Peserico: Variation in the electrical resistance of the submaxillary gland during functional activity.—C. Iucci: Capacity for parthogenesis of the egg of the second generation of the bivoltine race of silkworms.

## SYDNEY.

Linnean Society of New South Wales, March 31.—H. J. Carter: Entomology—past and present (presidential address). The scientific conception of entomology is modern. The seven orders into which Linnæus divided insects are, with one exception, surprisingly near the modern classification. Historical entomological records show the close interweaving of observation with pure fable characteristic of natural history literature, and great dependence on 'authority' and on superficial evidence. The great importance of the study of entomology and its increasing penetration into practical politics is also discussed. The immense number of insects, their complexity of form and development, their close interrelation, and their vast geological age give them a peculiar value to students of evolution and genetics. Australia, in particular, with its huge area of lightly differentiated regions—so far as defined zoogeographic barriers are concerned—affords a good field for the study of variation. The economic aspect of entomology is becoming more important. Reference is made to the attempts to control such pests in North America as the gipsy moth, the European corn borer, and the Japanese beetle, and in Australia the prickly pear, the cattle tick, and the sheep blow-fly. Satisfaction is expressed at the increasing number of Australian entomologists entering various fields. Among the advantages of having the systematic work done by Australians are: (1) The work is done largely by men who combine field observation with literary knowledge of the subject, and (2) the types remain in Australia for reference.—J. R. Malloch: Notes on Australian Diptera (No. viii.). Descriptions and notes on further Australian and Tasmanian species of Sapromyzidæ, Clusioididæ and Muscidæ; one genus and twenty-eight species are described as new.—R. J. Tillyard: Upper Permian insects of New South Wales. Part I. Introduction and the order Hemiptera. The upper Permian insect fauna found at Belmont, Warner's Bay, Merewether Beach, and Newcastle, N.S.W., is by far the most highly specialised Palæozoic insect fauna known, and consists of only small to medium-sized species belonging to the orders Hemiptera, Coleoptera, Mecoptera and Neuroptera, together with the two extinct orders, Paramecoptera and Proto-coleoptera. All these were holometabolous or ancestral to holometabolous forms, except only the Hemiptera, which are only represented by the sub-order Homoptera. In the Homoptera five families (all now extinct) are represented, with fifteen genera and twenty-eight species, twenty-four of which are described as new. The fauna thus ranks next in importance in number of genera and species to that of the Ipswich Upper Triassic in Queensland; as

regards the Sternorrhyncha, it is the richest fauna yet discovered.—C. H. Curran and E. H. Bryan, Jr.: The Australian Syrphidæ in the Bishop Museum (Diptera). The apparent abundance of species of *Psilota* is noteworthy as this genus is poorly represented in other parts of the world. Five species (two of *Psilota*, one *Chrysogaster*, one *Microdon*, and one *Ceriodes*) are described as new.—G. H. Cunningham: Gasteromycetes of Australasia (iv.). Species of the genus *Geaster*.

## WASHINGTON.

National Academy of Sciences (Proc. vol. 12, No. 4, April).—Carl Barus: Mutually counteracting pinhole probes.—Frank C. Hoyt: Transition probabilities and principal quantum numbers. Using the 'classical' form of the quantum theory, the transition probabilities are calculated from the term values of the stationary states of an atom alone, and the corresponding amplitudes can also be found. No justification is offered for the method of averaging used.—W. H. McCurdy: Absorption and resonance radiation in excited helium and the structure of the 3889 line. See NATURE, January 23, p. 122. The line 3889 Å.U. has a weak component 0.044 Å.U. to the short wavelength side of the main component.—B. Bruz: Thermodynamic derivation of a black body radiation isotherm. A number of processes of the form  $A \rightarrow B - Q$ , where  $Q$  is connected with the absorption of heat, are considered. An 'ideal' substance is used and  $Q$  is assumed to be independent of temperature.—Enos E. Witmer: Critical potentials and the heat of dissociation of hydrogen as determined from its ultraviolet band spectrum. Lyman found that in the presence of a large proportion of argon, helium emits groups of lines between  $\lambda$  1063 and 1670. Working on these results, the heat of dissociation of the hydrogen molecule is considered to be equal to the vibrational energy for that value of the vibrational quantum number at which the frequency is zero. The probable value is 4.34 volts or 100,100 calories. The higher resonance potentials and the ionisation potentials of the hydrogen molecule are calculated.—G. Y. Rainich: Curved space-time and radiation. The suggestion is put forward that radiation is concentrated in singular lines, when intensity becomes a statistical conception similar to that of modern conceptions of the mass of a body. This points to a reconciliation of the wave theory of light with the emission theory.—Friedrich G. Brieger and A. J. Mangelsdorf: Linkage between a flower colour factor and self-sterility factors. Three allelomorph sterility factors are recognised in *Nicotiana*. The factor for ivory flower colour and the sterility factors segregate independently; white flower colour is linked with them.—Clyde E. Kerler: On the occurrence in the house mouse of a Mendelising structural defect of the retina producing blindness. The defect is characterised by complete absence of rods and external molecular layer and reduction of the external nuclear layer, resulting in total blindness. It affects both sexes, behaves as a Mendelian recessive, carries no lethal action, and appears after birth.—Raymond Pearl: Vital statistics of the National Academy of Sciences. (5) The growth of the Academy. The numbers of living members on December 31 of each year are used. In the years 1863–76 the Academy doubled its membership; from 1867–90 it maintained a membership of about a hundred, decreasing afterwards until 1898. Since then it has steadily grown, and at the end of 1925 had reached 230.—Einar Hille: On Laguerre's series. (1) The formal Laguerre's series of a certain class of functions



can be shown to be summable Abel. Expansions of zero are obtained and a summation theorem for Hermitian series is given. (2) The summation theorem of (1) can be utilised in the convergence theory of Laguerre's series.—G. A. Miller: Groups containing a relatively small number of Sylow subgroups.

### Official Publications Received.

- Rhodesia Museum, Bulawayo. Twenty-fourth Annual Report, 1925. Pp. 15. (Bulawayo.)
- Report of the Canadian Arctic Expedition, 1913-18. Vol. 14: Eskimo Songs. Songs of the Copper Eskimos. By Helen H. Roberts and D. Jenness. Southern Party, 1913-16. Pp. 506. (Ottawa: F. A. Acland.)
- New Zealand. Department of Mines: Geological Survey Branch. Bulletin No. 27 (New Series): The Geology of the Whangarei-Bay of Islands Subdivision, Kaipara Division. By H. T. Ferrar and others. Pp. viii+134+6 plates. (Wellington, N.Z.: W. A. G. Skinner.) 15s.
- National Research Endowment. A National Fund for the Support of Research in Pure Science. Pp. 23. (Washington, D.C.: National Academy of Sciences.)
- Public Library, Museum and Art Gallery of South Australia. Records of the South Australian Museum. Vol. 3, No. 2. Pp. 103-217. (Adelaide.) 10s. 6d.
- Department of Public Instruction: Technical Education Branch, New South Wales. Technological Museum: Annual Report for Year ended 31st December 1925. Pp. 4. (Sydney, N.S.W.: Alfred James Kent.)
- Report of the Aeronautical Research Institute, Tokyo Imperial University. No. 14: Theory of Airscrews. By Sandi Kawada. Pp. 361-404. (Tokyo: Maruzen Kabushiki-Kaisha.) 75 sen.
- Imperial Department of Agriculture for the West Indies. Report on the Agricultural Department, Dominica, 1924-25. Pp. iv+34. (Barbados, B.W.I.) 6d.
- The Indian Forest Records. (Economy Series), Vol. 12, Part 3: Second Interim Report on the Work under Project No. 1 by the Section of Timber Testing including the Results of the Mechanical and Physical Tests on certain of the commoner Indian Timbers up to end of 1924. By L. N. Seaman, assisted by C. R. Ranganathan. Pp. 22+10 plates. (Calcutta: Government of India Central Publication Branch.) 1.12 rupees; 3s.
- State of Illinois Department of Registration and Education: Division of the Natural History Survey. Bulletin, Vol. 15, Article 8: An Entomological Survey of the Salt Fork of the Vermilion River in 1921, with a Bibliography of Aquatic Insects. By Charles P. Alexander. Pp. 439-536. Bulletin, Vol. 15, Article 9: The Lake as a Microcosm. By Stephen A. Forbes. Pp. 537-550. (Urbana, Ill.)
- Memoirs of the Queensland Museum. Edited by Heber A. Longman. Vol. 8, Part 3, March 31. Pp. 183-278+plates 29-43. (Brisbane, Qd.)
- Department of the Interior: Bureau of Education. Bulletin, 1925, No. 42: Statistics of State School Systems, 1923-1924. Pp. 43. (Washington, D.C.: Government Printing Office.) 10 cents.

### Diary of Societies.

#### SATURDAY, JUNE 5.

- ROYAL SOCIETY OF MEDICINE (Otolaryngology Section), at 10.30 A.M.—Dr. W. H. Hartridge: The Fundamental Experiments on which the Resonance Theory is based.
- NORTH OF ENGLAND INSTITUTE OF MINING AND MECHANICAL ENGINEERS (Associates' and Students' Section) (at Newcastle-on-Tyne), at 8.—P. S. Lea: Notes on Safety Lamps abstracted from Recent Reports.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 8.—Sir Walford Davies: The Triad and the Perfect Fourth; their Uses from Hnebald to the Present Day. (With Musical Illustrations.)

#### MONDAY, JUNE 7.

- ROYAL SOCIETY OF EDINBURGH, at 4.30.—Prof. F. H. Edgeworth: On the Development of the Cranial Muscles in Protopterus and Lepidosaurs.—Dr. G. W. Tyrrell and Dr. M. A. Peacock: The Petrology of Iceland. Part 1.—The Basic Tuffs.—MM. Prawochenski and Kaczowski: Observations on the Fragment of a Horse Skull from Interglacial Deposits near Pulawy, Poland.—Y. Tamura and Dr. F. A. E. Crew: On the Effects of Vasectomy and of Epididymo-Deferentectomy in the Mouse.
- INSTITUTE OF ACTUARIES, at 5.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 5.—General Meeting.
- ARISTOTELIAN SOCIETY (at University of London Club), at 8.—Dr. C. Delisle Burns: The Activity of Mind.
- ROYAL SOCIETY OF MEDICINE (Social Evening), at 9.30.—F. T. G. Hobday: Our Animal Friends as Patients (Address).

#### TUESDAY, JUNE 8.

- ROYAL ANTHROPOLOGICAL INSTITUTE (Exhibition of Tardenoisian and Pigmy Types of Stone Implements), at 2.30 (continued until June 22).
- MANCHESTER GEOLOGICAL AND MINING SOCIETY, at 4.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Brig.-Gen. Sir Percy Sykes: Chinese Turkestan and the Pamirs.
- QUEKETT MICROSCOPICAL CLUB, at 7.30.—E. Heron-Allen and A. Earland: Selective Building in the Shells of the Foraminifera.
- RÖNTGEN SOCIETY (Annual General Meeting) (at British Institute of Radiology), at 8.15.—A. E. Speight: Abstracts from Apparatus and Technique for Radiography of the Accessory Sinuses.—Dr. L. A. Levy and D. W. West: A New Method of Dosage for Use in Actinotherapy.

ROYAL ANTHROPOLOGICAL INSTITUTE (at London School of Economics), at 8.30.—M. Terry: Some Little Studied Aborigines encountered during Travels in Northern Australia.

#### WEDNESDAY, JUNE 9.

- ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Prof. J. Barcroft: Organs of Multiple Function (4): Lungs.
- GEOLOGICAL SOCIETY OF LONDON, at 5.30.—Dr. W. D. Lang: *Naos pagoda* (Salter): the Type of a New Genus of Silurian Corals.—J. F. Jackson: The Junction-Bed of the Middle and Upper Lias on the Dorset Coast.—Prof. P. G. H. Boswell: A Contribution to the Geology of the Eastern Part of the Denbighshire Moors.
- RADIO SOCIETY OF GREAT BRITAIN (Informal Meeting) (at Institution of Electrical Engineers), at 6.
- INSTITUTE OF WATER ENGINEERS (at Manchester) (continued on June 10, 11, and 12).

#### THURSDAY, JUNE 10.

- ROYAL SOCIETY, at 4.30.—Dr. A. V. Hill: The Viscous-Elastic Properties of Smooth Muscle.—A. S. Parkes: (a) Observations on the Oestrous Cycle of the Albino Mouse; (b) On the Occurrence of the Oestrous Cycle after X-Ray Sterilisation.—Isabella Gordon: The Development of the Calcareous Test of *Echinocardium cordatum*.—J. Walton: Contributions to the Knowledge of Lower Carboniferous Plants.—Prof. J. H. Priestley and E. Rhodes: On the Macro-Chemistry of the Endodermis.—D. Keilin: A Comparative Study of Turacin and Haematin and its Bearing on Cytochrome.—E. Ponder: The Equations applicable to simple Hemolytic Reactions.—J. P. Hoet and Phyllis Kerridge: Observations on the Muscles of Normal and Moulting Crustacea.—C. H. Best and H. P. Marks: Additional Note on the Effect of Insulin on the Lactacidogen Content of the Skeletal Muscles.
- INSTITUTE OF PATHOLOGY AND RESEARCH (ST. MARY'S HOSPITAL, Paddington), at 5.—Dr. J. Freeman: The Pathological Mechanism of the Asthma Syndrome.
- LINNEAN SOCIETY OF LONDON, at 5.
- LONDON MATHEMATICAL SOCIETY (at Royal Astronomical Society), at 5.—ROYAL INSTITUTION OF GREAT BRITAIN, at 5.15.—Dr. J. Newton Friend: Science in Antiquity (2).
- OPTICAL SOCIETY (at Imperial College of Science and Technology), at 7.30.—Dr. L. C. Martin: The Distribution of Light in Elementary Optical Images.—T. Smith: (a) Note on the Criterion for the Best Position of Focus; (b) The Stationary Position of Axially Symmetric Functions.

#### FRIDAY, JUNE 11.

- ROYAL SOCIETY OF ARTS (Indian Meeting), at 4.30.—Capt. B. K. Featherstone: Exploration in the Korakoram Mountains.
- ROYAL ASTRONOMICAL SOCIETY, at 5.—A. N. Brown: Observations of V Cassiopeiae (Ch. 8324) in 1921-26.—Dr. J. H. Jeans: Stellar Opacity and the Atomic Weight of Stellar Matter.—Dr. W. J. S. Lockyer: The Spectrum of the Bright-Hydrogen-Line Star H. D. C. 20336 in Camelopardalis (Sp. Type B3 pe).—L. J. Comrie: The Standard Equinox of 1950-0.
- PHYSICAL SOCIETY OF LONDON (at Imperial College of Science and Technology), at 5.—J. H. Awbery and Dr. Ezer Griffiths: The Latent Heat of Fusion of some Metals.—D. W. Dye: The Piezo-electric Quartz Resonator and its Equivalent Electric Circuit.—E. J. Evans: The Characteristics of Electrostatic Machines on Non-inductive Loads and on the Coolidge Tube.
- MALACOLOGICAL SOCIETY OF LONDON (at Linnean Society), at 6.
- ROYAL SOCIETY OF MEDICINE (Ophthalmology Section) (Annual General Meeting), at 8.30.—R. Pickard: The Visual Field in Atheroma of the Retinal Vessels.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Prof. J. C. McLennan: The Spectrum of the Aurora.

### CONGRESS.

JUNE 9 TO 12.

- SOUTH-EASTERN UNION OF SCIENTIFIC SOCIETIES (at Colchester).  
June 9.—R. A. Smith: Essex in Pre-Saxon Times (Presidential Address).  
June 10.—R. Paulson: The Beechwood; its Canopy and Carpet; Dr. E. J. Salisbury: The Plant Communities of the Seashore; C. E. Benham: Dr. Wm. Gilbert of Colchester, author of "De Magnete"; Alderman W. G. Benham: The Borough Arms at Colchester.  
June 11.—E. C. Stuart Baker: Some Curious Aspects of Evolution; Alderman W. G. Benham: The Colchester Oyster Fishery; S. Hazzledine Warren: The Correlation of the Lower Palaeolithic; E. A. Martin: Break-Names in Geological History.  
June 12.—A. Farquharson: The Social Constitution of a County; G. E. Hutchings: The Choice of Maps for Regional Surveys; Dr. C. Tierney: Some of Nature's Secrets.

### CONVENTION.

JUNE 7 TO 12.

- PHOTOGRAPHIC CONVENTION OF THE UNITED KINGDOM (at Edinburgh).

### PUBLIC LECTURES.

MONDAY, JUNE 7.

- ROYAL COLLEGE OF SCIENCE, at 5.30.—H. E. Wimperis: The Relationship of Physics to Aeronautical Research. (Institute of Physics Lectures on "Physics in Industry.")

#### WEDNESDAY, JUNE 9.

- KING'S COLLEGE, at 5.30.—Prof. S. Radhakrishnan: The Philosophic Basis of Hinduism. (Succeeding Lectures, under auspices of British Institute of Philosophical Studies, on June 16 and 23.)