

principle of the tube electrometer, and permits of proportional strengthening of the primary ion quantities. EUGEN GUTH and HERMANN MARK: Application of inner-molecular statistics to the properties of long-chain, especially highly polymeric, substances. Consideration of the stretch curve and the thermodynamic behaviour of rubber indicates that the extraordinary reversible elasticity of rubber is a consequence of the flexible long chains of which it is composed. The elasticity of aliphatic chain-like compounds, especially long-chain oils, disappears on passing to structures with numerous side-chains, which prevent free rotation, and is lacking also with systems consisting mainly of aromatic components. The elasticity of sulphur is also explainable by the presence of chain-like molecules; solid crystalline sulphur, on the other hand, consists of ring-shaped molecules of the formula  $S_8$ .

March 21. KARL METZ: Choristites from the Carinthian Alps. Several species of this sub-genus of the brachiopod family Spirifer from the upper carbonaceous of the Carinthian Alps are described. RAIMUND SCHIEDT: The number of  $\alpha$ -particles emitted by radium. Counts were made with two  $U_3O_8$  preparations of different uranium contents by means of the arrangement recently described. FRIEDRICH HECHT: The uranium contents of the  $U_3O_8$  preparations were determined. FRIEDRICH HERNEGGER and BERTA KARLIK: The determination of very small amounts of uranium, and the uranium content of sea-water. A spectrographic method, making use of the fluorescence of uranium in sodium fluoride, was used. The water of the Scandinavian coasts contains from  $3.6 \times 10^{-7}$  to  $2.3 \times 10^{-6}$  gm. uranium per litre. LAMBRECHT WISSGOTT: Mass spectrum of the positive rays of radium C'. OSWALD RICHTER: Induction of the destruction and maintenance of chlorophyll and of assimilation by ultraviolet rays of less than 300m $\mu$  from very powerful quartz mercury lamps. RUDOLF INZINGER: Geometry of torsions. ERNST PETER PICK: Transference of high and low blood-pressures. ARMIN DADIEU and HANS KOPFER: Raman spectra of heavy hydrocyanic acid and heavy hydrogen sulphide. The frequency of the C;N band falls from 2,094  $cm^{-1}$  in HCN to 1,906  $cm^{-1}$  in DCN; that of the D-C band in DCN remains to be determined. D<sub>2</sub>S shows a single strong Raman line at 1,875  $cm^{-1}$ . VIKTOR PIETSCHMANN: A new family of eels from Hawaiian waters. *Heteromyrus atollii*, nov. gen., nov. spec., is described.

### Forthcoming Events

[Meetings marked with an asterisk are open to the public.]

Sunday, June 2

BRITISH MUSEUM (NATURAL HISTORY), at 3 and 4.30.—M. A. Phillips: "British Birds".

Wednesday, June 5

GEOLOGICAL SOCIETY, at 5.30.—Prof. J. S. Lee: "The Tectonic Pattern of China and its Bearing upon the Problem of Continental Movement".

Thursday, June 6

ST. MARY'S HOSPITAL, LONDON, at 5.—Sir Henry H. Dale: "The Active Substances in Ergot: a Thirty Years' Review".\*

CHADWICK PUBLIC LECTURE, at 5.—(at The Chelsea Physic Garden, Swan Walk, S.W.3).—Sir E. John Russell: "Modern Changes in Food Production".\*

### Official Publications Received

#### GREAT BRITAIN AND IRELAND

The Entrance to Industry: a Survey of Points of Contact between Education and Industry in Great Britain, together with Proposals for raising the School Leaving Age and for Part Time Continued Education until 18, presented as a Contribution towards a New Employment Policy by P.E.P. (Political and Economic Planning). Pp. 56. (London: P.E.P.) 1s.

The Exit from Industry: a Survey of the Provision for Old Age and for Retirement from Gain Occupation in the United Kingdom, together with Proposals for a National Retirement Pensions Scheme, presented as a Contribution towards a New Employment Policy by P.E.P. (Political and Economic Planning). Pp. 52. (London: P.E.P.) 1s.

Public Museum, Gloucester. Occasional Papers, No. 2: Second Catalogue of Potters' Stamps on Terra Sigillata found in Gloucester. By Charles Green. Pp. 12+1 plate. (Gloucester: Public Museum.) 6d.

Society for the Preservation of the Fauna of the Empire. Occasional Paper No. 4: Report on the Vertebrate Fauna of the Owerri Province of Nigeria. By L. R. P. Heslop. Pp. 82+iv. (London: Society for the Preservation of the Fauna of the Empire.) 4s. 6d.

Air Ministry: Aeronautical Research Committee: Reports and Memoranda. No. 1619 (Strut. 197): Torsion of a Rectangular Tube with Axial Constraints. By D. Williams. Pp. 30+8 plates. 1s. 6d. net. No. 1622 (T. 3535): Flow in the Boundary Layer of Streamline Bodies. By H. M. Lyon. Pp. 54+26 plates. 3s. net. No. 1628 (F.M. 153 and 'a'): Direct Calibration of Compensated Hot-Wire Recording Anemometer. By C. Salter and W. G. Raymer. Pp. 9+7 plates. 9d. net. (London: H.M. Stationery Office.)

Imperial Institute. Annual Report 1934, by the Director, Sir Harry A. F. Lindsay, to the Board of Governors. Pp. 56. (London: Imperial Institute.) 2s.

Report of the Conference of Representatives nominated by the Universities of Oxford, Cambridge and London, the Royal College of Physicians of London, the Royal College of Surgeons of England, and the Society of Apothecaries of London, on the Medical Curriculum. Pp. ii+34. (London: University of London.)

#### OTHER COUNTRIES

Publikationer fra det Danske Meteorologiske Institut. Aarbøger. Isforholdene i de Arktiske Have (The State of the Ice in the Arctic Seas) 1934. Pp. 15+5 plates. (København: G. E. C. Gad.)

Koninklijk Nederlandsch Meteorologisch Instituut. No. 106A: Ergebnisse Aerologischer Beobachtungen, 22. 1933. Pp. iv+40+3 plates. 1.50 fl. 22A: Aerologische Beobachtungen und Terminbeobachtungen in Angmagssalik während des Internationalen Polarjahres 1932-1933. Pp. v+19+1 plate. 0.70 fl. No. 108: Seismische Registrierungen in De Bilt, 20, 1932; mit einem Anhang: Die Erdbeben in Noordbrabant von 20-28 November 1932. Pp. viii+52. 0.70 fl. (s Gravenhage: Rijksuitgeverij.)

Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. 87. Descriptions of Middle American Land and Freshwater Mollusca. By Henry A. Pilsbry. Pp. 6+1 plate. Tertiary Freshwater Mollusks of the Magdalena Embayment, Colombia. By Henry A. Pilsbry and Axel A. Olsson; with Tertiary Stratigraphy of the Middle Magdalena Valley, by O. C. Wheeler. Pp. 7-39+plates 2-5. Description of a New Scorpaenoid Fish (*Neomerinthe hemingwayi*) from off New Jersey. By Henry W. Fowler. Pp. 41-43. (Philadelphia: Academy of Natural Sciences.)

Division of Fish and Game of California: Bureau of Commercial Fisheries. Fish Bulletin No. 43: The Sizes of California Sardines caught by the different Fishing Gear and in the different Localities of the Monterey and San Pedro Regions. (Contributions No. 113-114 from the California State Fisheries Laboratory.) Pp. 59. (Terminal Island, Calif.: California State Fisheries Laboratory.)

U.S. Department of the Interior: Office of Education. Pamphlet No. 59: Legislation concerning Free Textbooks. By Ward W. Keesecker. Pp. 16. (Washington, D.C.: Government Printing Office.) 5 cents.

Fifty-first Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1933-1934. Pp. 8. (Washington, D.C.: Government Printing Office.)

U.S. Department of Agriculture. Circular No. 332: General Information about the Japanese Beetle in the United States. By C. H. Hadley and I. M. Hawley. Pp. 23. (Washington, D.C.: Government Printing Office.) 5 cents.

Report of the Aeronautical Research Institute, Tôkyô Imperial University. No. 118: JS-Diagrams for Combustion Gases of Rich Mixture. By Keiichi Tanaka and Seichi Awano. Pp. 495-528+11 plates. (Tôkyô: Kôgyô Tôsho Kabushiki Kaisha.) 1.35 yen.

The Parliament of the Commonwealth of Australia. Eighth Annual Report of the Council for Scientific and Industrial Research for the year ended 30th June 1934. Pp. 77. (Canberra: Government Printer.) 3s. 4d.

#### CATALOGUES

Sotheran's Price Current of Literature. No. 843: Annotated Catalogue of Works on Mathematics, Astronomy and Physics. Pp. 160. (London: Henry Sotheran, Ltd.)

Acetylcholine B.D.H. Pp. 8. (London: The British Drug Houses, Ltd.)

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