

acids. There appear to be two stages in the enzyme activity of pancreatic amylase, the latter of which is promoted when lysine and tryptophane are added, indicating that these acids are closely bound in the enzyme molecule as in typical proteins.—A. J. Lotka: Note on the relative abundance of the elements in the earth's crust. Arranging the elements appearing in the lithosphere, hydrosphere, and atmosphere in the order of the percentage in which they occur according to Prof. Harkins's data, some curious arithmetical properties of the percentages and atomic numbers appear. The results suggest that the earth's crust may be the product of subatomic disintegration of the nucleus on which it rests.—S. Lefschetz: Continuous transformations of manifolds.—J. W. Alexander: A lemma on systems of knotted curves. Every 3-dimensional closed orientable manifold may be generated by rotation about an axis of a Riemann surface with a fixed number of simple branch points, such that no branch point ever crosses the axis or merges into another.—W. M. Smallwood: The nerve net in the earthworm (preliminary report). Structures considered to be nerve fibres pass round the cells in the circular and the longitudinal muscles of the body wall and each blood-vessel appears to have a nerve net. The nerve net in the layer covering all the internal organs is very extensive, originating apparently in the body wall. The nephridia appear to have a particularly good nerve supply.

Official Publications Received.

- Jahrbücher der Zentralanstalt für Meteorologie und Geodynamik. Amtliche Veröffentlichung. Jahrgang 1918. Neue Folge, 55 Band. Pp. xiv + A24 + B38 + C30 + F15. (Wien: Gerold und Komp.)
- Conseil Permanent International pour l'Exploration de la Mer. Rapports et Procès-Verbaux des Réunions. Vol. 29: Rapport Atlantique 1921. (Travaux du Comité du Plateau Continental Atlantique) (Atlantic Slope Committee). Par Dr. Ed. Le Danois. Pp. 75 + 19 planches. (Copenhague: A. F. Høst et Fils.)
- Department of Commerce: Circular of the Bureau of Standards. No. 138: A Decimal Classification of Radio Subjects—an Extension of the Dewey System. Pp. 35. 10 cents. No. 142: Tables of Thermodynamic Properties of Aramonia. Pp. 48. 15 cents. (Washington: Government Printing Office.)
- Department of Commerce: U.S. Coast and Geodetic Survey. Serial No. 216: Use of Geodetic Control for City Surveys. By Hugh C. Mitchell. (Special Publication No. 91.) Pp. v + 80. (Washington: Government Printing Office.) 20 cents.
- Smithsonian Institution: Bureau of American Ethnology. Bulletin 77: Villages of the Algonquian, Siouan, and Caddoan Tribes West of the Mississippi. By David L. Bushnell, Jr. Pp. x + 211 + 55 plates. (Washington: Government Printing Office.)
- Department of the Interior: United States Geological Survey. Bulletin 720: Economic Geology of the Summerville and Woodsfield Quadrangles, Ohio, with Descriptions of Coal and other Mineral Resources except Oil and Gas. By D. Dale Condit. Pp. 156 + 12 plates. 30 cents. Bulletin 737: Manganese Deposits of East Tennessee. By G. W. Stose and F. C. Schrader. Pp. x + 154 + 30 plates. 50 cents. (Washington: Government Printing Office.)
- Department of Commerce: Technologic Papers of the Bureau of Standards. No. 235: Thermal Stresses in Steel Car Wheels. By George K. Burgess and G. Willard Quick. Pp. 307-403. (Washington: Government Printing Office.) 15 cents.

Diary of Societies.

SATURDAY, JUNE 2.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. A. W. Hill: The Vegetation of the Andes.

MONDAY, JUNE 4.

OIL CONFERENCE AT THE SIXTH INTERNATIONAL MINING EXHIBITION (at Royal Agricultural Hall, Islington), at 12 and 2.30.—E. H. Cunningham Craig: The Riddle of the Carpathians.—Dr. M. Kraus: Oil Deposits and the Tectonics of Vertical Pressure.—R. d'Andrimont: Note on the Genesis of Hydrocarbons and their Localisation in certain Zones of the Earth's Crust.

INSTITUTE OF ACTUARIES, at 5.—Annual General Meeting.

ROYAL INSTITUTION OF GREAT BRITAIN, at 5.—General Meeting.

ARISTOTELIAN SOCIETY (at University of London Club), at 8.—Sir Leslie Mackenzie: What does Dr. Whitehead mean by "Event"?

ROYAL SOCIETY OF CHEMICAL INDUSTRY (London Section) (at Chemical Society), at 8.—Dr. H. S. Hale-Shaw: The Stream-line Filter.

ROYAL GEOGRAPHICAL SOCIETY (at Æolian Hall), at 8.30.—F. Rodd: Journeys in Air.

TUESDAY, JUNE 5.

OIL CONFERENCE AT THE SIXTH INTERNATIONAL MINING EXHIBITION (at Royal Agricultural Hall, Islington), at 12.—A. Beeby Thompson: Oilfield Waste.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Prof. W. M. Flinders Petrie: Discoveries in Egypt (3).

ROYAL SOCIETY OF ARTS (Dominions and Colonies Section), at 4.30.—Sir Edward Davson: The Economic Conference and Crown Colony Development.

FELLOWSHIP OF MEDICINE (at Royal Society of Medicine), at 5.30.—R. A. Hendry: The Value of Antenatal Supervision.

RÖNTGEN SOCIETY (at Institution of Electrical Engineers), at 8.15.—Prof. S. Russ: The Effects of X-rays of Different Wave-Lengths on Animal Tissue.—T. Thorne Baker: The Establishment of a Definite Relationship between Exposure and Density in an X-ray Plate.

WEDNESDAY, JUNE 6.

ROYAL SOCIETY OF MEDICINE (Surgery Section), at 5.30.—R. H. A. White-locke: The Treatment of Fractures of the Patella.—W. White: The Closure of the Supra-pubic Fistula following Prostatectomy: Observations on Sixty-eight Cases.

GEOLOGICAL SOCIETY OF LONDON, at 5.30.—Dr. H. Bolton: A new Blatford Wing from the Harrow Hill Mine, Drybrook, Forest of Dean.—Dr. C. E. Tilley: Contact-Metamorphism in the Comrie Area of the Perthshire Highlands.

INSTITUTION OF ELECTRICAL ENGINEERS (Wireless Section), at 6.—C. E. Horton: Wireless Direction-finding in Steel Ships.

ENTOMOLOGICAL SOCIETY OF LONDON, at 8.

THURSDAY, JUNE 7.

OIL CONFERENCE AT THE SIXTH INTERNATIONAL MINING EXHIBITION (at Royal Agricultural Hall, Islington), at 12 and 2.30.—Prof. J. Voitești: The Mode of Appearance of the Petroleum Deposits in the Carpathian Region, with general consideration on the Genesis of the Petroleum and the Source of the Actual Deposits.—Major J. A. Lautier: An Economic Study of Petroleum Mining by Underground Drainage.

ROYAL INSTITUTION OF GREAT BRITAIN, at 8.—Sir William M. Bayliss: The Nature of Enzyme Action (2).

ROYAL SOCIETY, at 4.30.—Sir Charles Sherrington and E. G. T. Liddell: Stimulus Rhythm in Reflex Tetanic Contraction.—K. N. Moss: Some Effects of High Air Temperatures and Muscular Exertion upon Colliers.—F. A. E. Crew: The Significance of an Achondroplasia-like Condition met with in Cattle.

LINNEAN SOCIETY OF LONDON, at 5.

ROYAL COLLEGE OF PHYSICIANS OF LONDON, at 5.—Prof. J. B. Leathes: The Role of Fats in Vital Phenomena. (Croonian Lectures (1)).

CHEMICAL SOCIETY, at 8.—H. Hunter: Investigations on the Dependence of Rotatory Power on Chemical Constitution. Part XX. The Rational Study of Optical Properties: Refraction a Constitutive Property.—A. B. Goddard: Researches on Indium. Part I. Diphenyl Indium Chloride and Phenyl Indium Oxide.—E. P. Perman and W. J. Howells: The Properties of Ammonium Nitrate. Part VI. The Reciprocal Salt Pair, Ammonium Nitrate and Potassium Sulphate.—E. W. Lanfear and J. F. Thorpe: Ring Chain Tautomerism. Part VI. The Mechanism of the Keto-cyclol Change in the Propane Series.—E. H. Usherwood: The Reversibility of Additive Reactions. Part I. The Aldol Reaction.—C. K. Ingold: Mechanism of the Pinacone-pinacolone and Wagner-Meerwein Transformations.—A. E. Goddard: Researches on Antimony. Part I. Tri-m-xylolistibine and its Derivatives.

ROYAL SOCIETY OF MEDICINE (Obstetrics and Gynaecology Section), at 8.—V. Bonney: Diurnal Incontinence of Urine in Women.—L. Phillips: The Treatment of Dysmenorrhoea, with Analysis of 100 Cases.

FRIDAY, JUNE 8.

OIL CONFERENCE AT THE SIXTH INTERNATIONAL MINING EXHIBITION (at Royal Agricultural Hall, Islington), at 12 and 2.30.—O. A. Young and S. D. Tutthill: The Standardisation Movement in America, and its Relation to and Application towards the Elimination of Waste in the Petroleum Industry.—G. Howell: The Caribbean Oil Region.

DIESEL ENGINE USERS' ASSOCIATION (at Institution of Electrical Engineers), at 2.30.—Eng.-Commr. W. P. Sillicane: Losses in Heat Engines and Means of Avoiding Them.

ROYAL ASTRONOMICAL SOCIETY, at 5.—W. S. Adams and G. Strömberg: Stellar Velocity and Absolute Magnitude: Note on a Paper by Prof. Eddington and Miss Douglas.—A. Buxton: Note on the Effect of Astigmatism on Star-Discs.

PHYSICAL SOCIETY OF LONDON (at Imperial College of Science and Technology), at 5.—Prof. J. G. Gray: A General Solution of the Problem of Finding the True Vertical for All Types of Marine and Aerial Craft, to be followed by a discussion.

MALACOLOGICAL SOCIETY OF LONDON (at Linnean Society), at 6.

ROYAL SOCIETY OF MEDICINE (Ophthalmology Section) (Annual General Meeting), at 8.30.—Miss Ida C. Mann: Some Suggestions on the Embryology of Congenital Crescentia.—P. Doyle: The Tournée Reaction.

ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Miss Joan Evans: Jewels of the Renaissance.

SATURDAY, JUNE 9.

ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. A. W. Hill: The New Zealand Flora.

PUBLIC LECTURES.

MONDAY, JUNE 4.

UNIVERSITY COLLEGE, at 5.30.—Prof. H. A. Lorentz: Problems in Relativity. (Succeeding Lectures on June 5 and 7.)

TUESDAY, JUNE 5.

KING'S COLLEGE, at 5.30.—Miss Hilda D. Oakeley: The Conflict within the Greek Moral Ideal. (Succeeding Lectures on June 12 and 19.)

WEDNESDAY, JUNE 6.

UNIVERSITY COLLEGE, at 5.—Prof. G. N. Lewis: The Structure and Behaviour of the Molecule. (Succeeding Lectures on June 8 and 12.)

THURSDAY, JUNE 7.

ST. MARY'S HOSPITAL (Institute of Pathology and Research), at 4.30.—Prof. F. G. Hopkins: An Oxidising Agent in Living Tissues.