

mantle of recent alluvial and blown sand, but the outcrops which do occur consist mainly of igneous rocks (lava flows). These Kuttung lavas fall into three groups as follows: (a) Andesites; (b) toscanites; and (c) rhyolites. The andesites occur near the base of the series, and have associated with them coarse conglomerates; the toscanites form a very thick series of flows upwards of 1000 ft. in thickness. With the rhyolites is associated a thick series of sedimentary strata consisting mainly of tuffs and tuffaceous conglomerates, but containing also thin beds of cherty shales containing fossil plants (*Rhacopteris*, etc.). These facts indicate that the district suffered from intense volcanic activity during the Carboniferous period.—R. H. Cambage: The outbreak of springs in autumn. During drought times it is not uncommon to hear of the outbreak of springs in New South Wales between February and June; this has nothing to do with the droughty conditions, but is the result of diminishing evaporation. These springs usually come from swamps, and often stop running during the hot weather owing to the whole of the moisture on the surface of the swamp being evaporated. At Kosciusko there is a small roadside spring which regularly flows a distance of 252 yards during the afternoon while it is in shadow, and at night, but late in the forenoon, owing to evaporation while it is fully exposed to the sun, it can only reach a distance of 160 yards. The outbreak of springs has no bearing on the duration of a drought.

Oct. 3.—W. F. Blakely: Description of three new Eucalypts and one new Acacia. Two of the new species of *Eucalyptus* are stringybarks; the other belongs to the Hemiphloë group and is allied to the broad-leaved peppermints. The acacia is an interesting alpine species with affinities to *A. podalyricifolia*.

Official Publications Received.

BRITISH.

- Board of Trade. British Industries Fair, 1929, The White City, Shepherd's Bush, London, W.12, February 18th-March 1st. Organised by the Department of Overseas Trade. Special Overseas Advance edition. Pp. xvi+400+Ad. 250. (London: Board of Trade.) 1s.
- Department of Agriculture, Trinidad and Tobago. Witch-Broom Disease of Cacao and its Control. By F. Stell; and Note by the Hon. A. B. Carr; Appendix: What is a Fungus? by F. Stell. Pp. 19+2 plates. (Trinidad B.W.I.: Government Printing Office, Port-of-Spain.) 3d.
- Publications of the Dominion Astrophysical Observatory, Victoria, B.C. Vol. 4, No. 5: The Spectroscopic Orbit of H.E. 5702 and Velocity and Light Curves of 12 Lacertae. By William H. Christie. Pp. 55-65. Vol. 4, No. 6: The Orbits of the Spectroscopic Components of the two Helium Stars H.D. 19820 and H.D. 176853. By J. A. Pearce. Pp. 67-79. Vol. 4, No. 7: Two A-type Binaries and the Radial Velocities of 50 Stars. By R. M. Petrie. Pp. 81-95. Vol. 4, No. 8: The Spectroscopic Orbit of H.D. 176819 and a Note on H.D. 185936. By P. M. Millman. Pp. 97-101. Vol. 4, No. 9: Two Spectroscopic Orbits and Notes on ν Sagittarii. By J. S. Flasket. Pp. 103-118. (Victoria, B.C.)
- Royal Society of Arts, John Street, Adelphi, London, W.C. 2. Report on the Competition of Industrial Designs, 1928. Pp. 46. (London.)
- Papers of the Society of Painters in Tempera. Edited by M. Sargant-Florence. Vol. 1: 1901-1907. Second edition, revised and brought up to date with Appendix by the Society of Mural Decorators and Painters in Tempera. Pp. ix+96. (Brighton: The Dolphin Press.) 10s. 6d.

FOREIGN.

- Geology and Water Resources of Palestine. By G. S. Blake. Pp. 51. (Jerusalem: Department of Lands.) 100 mils.
- Annual Report of the Board of Regents of the Smithsonian Institution showing the Operations, Expenditures and Condition of the Institution for the Year ending June 30, 1927. (Publication 2927.) Pp. xii+580+99 plates. (Washington, D.C.: Government Printing Office.) 1.75 dollars.
- Stanford University Publications: University Series. Biological Sciences, Vol. 5, No. 2: The Fossil Fishes of the Miocene of Southern California, Contribution No. 9. By David Starr Jordan. Pp. 16+4 plates. (Stanford University, Calif.: Stanford University Press.) 50 cents.

CATALOGUES.

- Catalogue of B.D.H. Fine Chemical Products. (January 1929.) Pp. 130. (London: The British Drug Houses, Ltd.)
- The Photo-electrical Recording Photometer. Second edition. (Mess 469/II.) Pp. 7. Photographs taken with the Recording Photometer. (Mess 469b.) Pp. 4. (London and Jena: Carl Zeiss, Ltd.)

No. 3090, VOL. 123]

Diary of Societies.

FRIDAY, JANUARY 18.

- TEXTILE INSTITUTE (Lancashire Section) (at Manchester), at 1.15.—J. P. O'Callaghan: Water Softening for the Textile Industries.
- BRITISH INSTITUTE OF RADIOLOGY (Medical Members), at 5.—Informal Discussion on Gastro-intestinal Cases.
- ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Sir Arthur Keith: The Anatomy and Evolution of the Human Brain.
- SOCIETY OF CHEMICAL INDUSTRY (Liverpool Section) (at Liverpool University), at 6.—C. Gordon Smith: Common Salt.
- INSTITUTION OF MECHANICAL ENGINEERS, at 6.—J. G. Weir: Modern Feed-Water Circuits.
- INSTITUTION OF CHEMICAL ENGINEERS, (at Institution of Civil Engineers), at 6.30.—Prof. J. W. Cobb: The Reactivities of Solid Carbon in Fuel Processes (Lecture).
- SOCIETY OF DYERS AND COLOURISTS (Manchester Section), at 7.—Dr. S. G. Barker: The Standardisation of Fastness of Dyestuffs on Dyed Fabrics.
- ROYAL PHOTOGRAPHIC SOCIETY OF GREAT BRITAIN (Pictorial Group), at 7.—M. O. Dell: Some Recent Prints from the Pyrenees.
- GLASGOW SOCIETY OF DYERS (at 7 Gordon Street, Glasgow), at 7.15.—A. J. Hall: The Action of Swelling Agents on Artificial Silk.
- JUNIOR INSTITUTION OF ENGINEERS, at 7.30.—J. F. Petree: Notes on the Fitting and Operation of Michell Bearings.
- OIL AND COLOUR CHEMISTS' ASSOCIATION (Manchester Section) (at Milton Hall, Manchester), at 7.30.—Dr. J. J. Fox: The Examination of Paints.
- INSTITUTION OF AUTOMOBILE ENGINEERS (Scottish Graduates) (at 51 West Regent Street, Glasgow), at 8.—J. Swan: Dynamometers.
- ROYAL SOCIETY OF MEDICINE (Pathology, Surgery, and Obstetrics Sections), at 8.—Special Discussion on Post-operative Thrombosis. Openers: W. H. Evans (Pathology), D. H. Patey (Surgery), V. Bonney (Obstetrics).
- ROYAL SOCIETY OF MEDICINE (Electro-Therapeutics Section), at 8.30.—C. T. Holland: Epiphyseal Injuries of the Wrist Joint.—Dr. R. S. Patterson: Some Factors Influencing Epiphyseal Growth and Union.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 9.—Sir William Bragg: Further Progress in Crystal Analysis.
- TODMORDEN TEXTILE SOCIETY (at Todmorden).—H. P. Curtis: Cloth Testing and Examination from the Manchester Man's View.

SATURDAY, JANUARY 19.

- GEOLOGISTS' ASSOCIATION (at Museum of Practical Geology, Jermyn Street), at 2.30.—Dr. R. Crookall: Demonstration of Coals, their Composition and Origin.
- PHYSIOLOGICAL SOCIETY (at National Institute for Medical Research, Mount Vernon, Hampstead), at 3.—Dr. H. H. Dale, H. W. Dudley, H. P. Marks, and J. H. Gaddum: A Choline Ester (?) in Extracts of Spleen.—Prof. L. Hill: Sphrymometry of the Vessels of the Frog's Leg.—J. A. Campbell and T. Angus: Water Evaporated from the Body in Relation to Work.—J. A. Campbell: Tensions of Gases in Tissues. (a) Effects of CO Poisoning; (b) Hydrogen in the Peritoneal Cavity.—F. M. Durham: Effect of Alcohol on Genetic Behaviour of Guinea Pigs.—H. V. Horton and W. Dulière: Reversible Loss of Excitability in Isolated Amphibian Voluntary Muscles.—W. Dulière: The Condition of Creatine in Amphibian Voluntary Muscle.—D. W. Bronk: The Energy Expended in Maintaining a Contraction.—Prof. A. V. Hill: The Restoration of Fatigued Muscle by Washing with Oxygen-free Ringer's Fluid.—H. E. Magee: Further Experiments on the Movements of Isolated Intestinal Loops.—A. N. Drury and A. Szent-Györgyi: The Influence upon the Heart of a Substance Present in Heart Muscle and other Tissues.—Demonstrations.—J. A. Campbell: (a) Effects of Prolonged Exposure to Low Tensions of Oxygen; (b) Gas Tensions at the Surface of the Skin of Man.—Prof. L. Hill: A Katathermometer Graduated for Warm Atmospheres.—Prof. L. Hill and J. McQueen: Capillary Circulation in Liver of Mouse.—R. B. Bourdillon and R. G. C. Jenkins: Methods of Measuring Absorption of Ultra-violet Rays.—A. Eidinow: Sensitisation to Fluorescent Radiation.—Dr. H. H. Dale: Complete Artificial Perfusion of the Liver.—J. H. Gaddum: (a) Use of Richards-Collison Metabolism Apparatus for Thyroxin, etc.; (b) An Outflow Recorder for Rapid Flows.—H. E. Magee and J. J. R. Macleod: Diffusion through the Wall of the Living and Dead Intestine.
- ROYAL INSTITUTION OF GREAT BRITAIN, at 3.—Dr. E. Cammaerts: Flemish and Belgian Art (I): The Portrait.
- BRITISH ASSOCIATION OF MANAGERS OF TEXTILE WORKS (at Athenæum, Manchester), at 6.30.—W. A. Hanton: Recent Loom Design (Lecture).
- HULL ASSOCIATION OF ENGINEERS (at Municipal Technical College, Hull).—J. Evans: Modern Steam Condensers and Feed Systems.

MONDAY, JANUARY 21.

- ROYAL SOCIETY, EDINBURGH, at 4.30.—R. B. Mooney and E. B. Ludlam: The Thermal Equilibrium between Ethylene, Iodine, and Ethylene Di-Iodide.—E. B. Ludlam, H. G. Reid, and G. S. Soutar: The Hydrogen-Chlorine Flame.—R. W. Armour and E. B. Ludlam: Photochemical Equilibrium between Hydrogen, Bromine, and Hydrogen Bromide.—W. W. Taylor: Demonstration of a New Method of Determining Free and Bound Water.—W. W. Taylor: The Lyotrope Effect and the Antagonistic Action of Ions.—W. O. Kermack, A. G. M'Kendrick, and Eric Ponder: The Stability of Suspensions: III. The Velocities of Sedimentation and of Cataphoresis of Suspensions in a Viscous Fluid.
- VICTORIA INSTITUTE (at Central Hall, Westminster), at 4.30.—Rev. C. W. Cooper: Precious Stones of the Bible, with Special Reference to the High Priest's Breast Plate.
- ROYAL COLLEGE OF SURGEONS OF ENGLAND, at 5.—Sir Arthur Keith: The Anatomy and Evolution of the Human Brain.
- TEXTILE INSTITUTE (London Section) (at Clothworkers' Hall), at 6.—G. Garnett: Woollens and Worsteds Customs Designation (Lecture).
- INSTITUTION OF MECHANICAL ENGINEERS (Graduates' Section, London) (jointly with Students' Sections of Institution of Civil Engineers and Institution of Electrical Engineers), at 6.30.—H. R. Sketch: Engineering Insurance.