

for ionisation within metals.—Sinclair Smith: The effect of low temperatures on the sensitivity of radiometers. Radiometers in hydrogen, helium, and air in a specially designed chamber at  $-180^{\circ}\text{C}$ . were exposed to light from a controlled source. Maximum sensitivity increases at low temperature and shifts towards lower pressures.

## Official Publications Received.

### BRITISH.

Mines Department. Eighth Annual Report of the Safety in Mines Research Board, including a Report of Matters dealt with by the Health Advisory Committee, 1929. Pp. 62. (London: H.M. Stationery Office.) 1s. net.

Astrophographic Catalogue 1900-0. Sydney Section, Dec.  $-51^{\circ}$  to  $-65^{\circ}$ , from Photographs taken at the Sydney Observatory, New South Wales, Australia. Vol. 11: R.A.  $12^{\text{h}}$  to  $18^{\text{h}}$ , Dec.  $-53^{\circ}$  to  $-55^{\circ}$ , Plate Centres Dec.  $-54^{\circ}$ . Pp. 86. Vol. 12: R.A.  $18^{\text{h}}$  to  $24^{\text{h}}$ , Dec.  $-53^{\circ}$  to  $-55^{\circ}$ , Plate Centres Dec.  $-54^{\circ}$ . Pp. 43. (Sydney, N.S.W.: Alfred James Kent.)

The Scientific Proceedings of the Royal Dublin Society. Vol. 19 (N.S.), No. 38: A Study of the Polysaccharides. Part 2: Note on the Purification of the Natural Products. By J. Reilly and Declan T. McSweeney. Pp. 451-453. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.) 6d.

The North of Scotland College of Agriculture. Calendar, Session 1930-1931. Pp. viii+120. (Aberdeen.)

Proceedings of the Royal Society. Series A, Vol. 128, No. A808. Pp. 361-666. (London: Harrison and Sons, Ltd.)

The Journal of the Ipswich and District Natural History Society. Edited by Henry Ogle. Vol. 1, Part 2. Pp. ii+71-140. (Ipswich.)

Imperial Agricultural Bureau. Bulletin No. 1: Miscellaneous Information relating to Breeding of Herbage Plants. Pp. 22. Plant Genetics: Herbage Plants. Catalogue of Journals and Periodicals in the various Libraries in Aberystwyth to which the Bureau has Access. Supplement to Bulletin No. 1, 1930. Pp. 10. (Aberystwyth.)

The Rowett Research Institute. Collected Papers, Vol. 2. Edited by Dr. John Boyd Orr. Pp. xv+588. (Aberdeen.) 21s.

Forestry Commission. Tenth Annual Report of the Forestry Commissioners, Year ending September 30th, 1929. Pp. 69. (London: H.M. Stationery Office.) 1s. 3d. net.

### FOREIGN.

Proceedings of the Imperial Academy. Vol. 6, No. 6. Pp. xix-xxi+217-242. (Tokyo.)

The Science Reports of the Tôhoku Imperial University, Sendai, Japan. Second Series (Geology), Vol. 14, No. 1. Pp. 96+28 plates. Fourth Series (Biology), Vol. 5, No. 2. Pp. 215-422+plates 9-14. (Tokyo and Sendai: Maruzen Co., Ltd.)

Svenska Hydrografisk-Biologiska Kommissionens Fyrskapsundersökning. År 1929. Pp. 45. (Göteborg: Elanders Boktryckeri A.-B.)

Japanese Journal of Mathematics: Transactions and Abstracts. Vol. 7, No. 1. Pp. 99. (Tokyo: National Research Council of Japan.)

Annales de l'Observatoire de Paris: Section d'Astrophysique à Meudon. Tome 8, Fascicule 2: Recherches sur la structure de la chromosphère solaire. Par L. D'Azambuja. Pp. iii+120+10 planches. (Paris: Gauthier-Villars et Cie.)

Proceedings of the American Philosophical Society. Vol. 69, No. 5. Pp. 257-294. (Philadelphia.)

Division of Fish and Game of California. Fish Bulletin No. 22: A Bibliography of the Tunas. By Genevieve Corwin. (Contribution No. 87 from the California State Fisheries Laboratory.) Pp. 103. (Terminal, Calif.: California State Fisheries Laboratory.)

Bulletin of the Vanderbilt Marine Museum. Vol. 1, Art. 2: Scientific Results of the Yacht *Ara* Expedition during the Years 1926 to 1930, while in Command of William K. Vanderbilt. Fishes (collected in 1929). By N. A. Borodin. Pp. 89-64+2 plates. (Cambridge, Mass.: The Cosmos Press, Inc.)

Ministry of Public Works, Egypt: Physical Department. Physical Department Paper No. 27: Upper Winds at Cairo and Khartoum. By L. J. Sutton. Pp. 52+6 plates. (Cairo: Government Press.) 10 P.T.

### CATALOGUES.

Photography Simplified: Printing and Toning. Pp. 12. (London: Burroughs Wellcome and Co.)

A Catalogue of Important Scientific Books containing Standard and Rare Works on Ornithology, Zoology, Ecology, Entomology, Botany, Forestry, Mathematical and Physical Sciences, Natural History in General. Pp. 30. (London: W. and G. Foyle, Ltd.)

The Nickel Bulletin. Vol. 3, No. 8, August. Pp. 241-280. (London: The Mond Nickel Co., Ltd.)

## Diary of Societies.

### CONGRESSES.

#### SEPTEMBER 3 TO 10.

BRITISH ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE (at Bristol). (For particulars see *NATURE* of Aug. 30.)

Change of Programme.—(B) Sept. 9, at 11 A.M.—Prof. C. S. Gibson and Prof. J. L. Simonsen: Some Recent Investigations of Organic Compounds of Gold; instead of Prof. Semenoff: The Initiation of Combustion.

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#### SEPTEMBER 4 TO 14.

INTERNATIONAL ZOOLOGICAL CONGRESS (at Padua).

#### SEPTEMBER 7 TO 13.

INTERNATIONAL CONGRESS OF AMERICANISTS (at Hamburg).—Papers on The Aboriginal Peoples of America and their Ethnic Relations, The Prehistory of America, Manners and Customs of the Various Groups of Indians and their Distribution in the Old and New World, The Aboriginal Languages, The Discovery and Colonisation of America, The Geography and Geology of America, with Special Reference to Human Activities, and a Discussion on The Civilisation of the Indians at the time of their first contact with Europeans and to-day.

#### SEPTEMBER 8 TO 12.

INTERNATIONAL CONFERENCE OF THE APIS CLUB.

Monday, Sept. 8 (at Apothecaries' Hall, Water Lane, E.C.). at 3.30.—Miss Annie D. Betts: The National Importance of Apiculture (Presidential Address).

Wednesday, Sept. 10 (at Crystal Palace).—Dr. G. Morison: Notes on Acarine Disease.

Thursday, Sept. 11 (at Crystal Palace), at 11 A.M.—Dr. H. W. de Boer: Behaviour of Diastatic Ferments in Honey when Heated.

At 12 noon.—C. H. Hooper: Fruit Pollination and the Importance of Insect Visitors in Fruit Production.

At 2.30.—D. Morland: Frosting.

At 5.30.—Dr. F. Kretschy: Our Bee as Doctor.

At 6.30.—L. M. Bertholf: The Distribution of Stimulative Efficiency in the Ultra-Violet for the Honey Bee.

Friday, Sept. 12 (at Crystal Palace), at 11 A.M.—M. le Chanoine A. Delaigues: Transformism.

At 12 noon.—Dr. J. Stitz: Ultra-Violet Absorption of Honey.

#### SEPTEMBER 9 TO 12.

INSTITUTE OF METALS (at Southampton).

Tuesday, Sept. 9 (in Chantry Hall), at 8 P.M.—Prof. D. Hanson: The Use of Non-Ferrous Metals in the Aeronautical Industry (Autumn Lecture).

Wednesday, Sept. 10 (in Chantry Hall), at 10 A.M.—E. A. Smith: Rolled Gold: Its Origin and Development.

Dr. W. Rosenhain, J. D. Grogan, and T. H. Schofield: Gas Removal and Grain Refinement of Aluminium Alloys.

J. D. Grogan: Pressure Die-Cast Aluminium Alloy Test-Pieces.

N. W. Ageew and Olga I. Vher: The Diffusion of Aluminium into Iron.

Dr. K. L. Meissner: The Artificial Ageing of Duralumin and Super-Duralumin.

Dr. W. L. Fink and Dr. K. R. Von Horn: Lattice Distortion as a Factor in the Hardening of Metals.

Dr. Marie L. Gayler: A Study of the Relation between Macro- and Microstructure in Some Non-Ferrous Alloys.

Thursday, Sept. 11 (in Chantry Hall), at 10 A.M.—Dr. J. C. Hudson: The Effect of Two Years' Atmospheric Exposure on the Breaking Load of Hard-Drawn Non-Ferrous Wires.

Dr. W. H. J. Vernon and L. Whitby: The Open-Air Corrosion of Copper. Part II. The Mineralogical Relationships of Corrosion Products.

Dr. E. Voce: Silicon-Copper Alloys and Silicon-Manganese-Copper Alloys.

E. Vaders: A New Silicon-Zinc-Copper Alloy.

H. C. Dewes: The Effects of Phosphorus on the Strength of Admiralty Gun-Metal.

Dr. D. Stockdale: A Note on the Constitution of the Cadmium-Zinc Alloys.

Prof. G. Tammann: On the Determination of Crystallite Orientation.

D. A. N. Sandifer: Pendulum Hardness Tests of Commercially Pure Metals.

F. Hargreaves: Heat-Treatment, Ball-Hardness, and Allotropy of Lead.

#### SEPTEMBER 11 TO 14.

SWISS SOCIETY OF NATURAL SCIENCES (at St. Gallen).—In sixteen sections covering Pure and Applied Science and Medicine. Addresses by Prof. E. Abderhalden, on The Significance and Mechanism of Ferments in Nature; Prof. P. Niggli, on Ten Years' Work of a Mineralogical and Petrographic Institute; Prof. R. Chodat, on The Symbiosis of Lichens and the Problem of Specificity; and Prof. C. Wegelin, on Endemic Cretinism.

#### SEPTEMBER 13 TO 20.

NEWCOMEN SOCIETY FOR THE STUDY OF THE HISTORY OF ENGINEERING AND TECHNOLOGY (at Liverpool).

#### SEPTEMBER 15 TO 20.

IRON AND STEEL INSTITUTE (in Czechoslovakia).

Monday, Sept. 15, at 10 A.M.—A. Kříž: The Heterogeneity of an Ingot made by the Harmet Process.

J. Šárek: What Reasons Compelled the Prague Ironworks to Introduce Thin-Walled Blast-Furnaces.

W. H. Hatfield: Permanence of Dimensions under Stress at Elevated Temperatures.

Tuesday, Sept. 16, at 10 A.M.—O. Quadrat: A Contribution on the Problem of the Analysis of Basic Slags and the Representation of their Composition in a Triangular Diagram.

H. C. Wood: Open-Hearth Furnace Steelworks. A Comparison of British and Continental Installations and Practice.

D. F. Campbell: High-Frequency Steel Furnaces.

L. W. Schuster: The Effect of Contamination by Nitrogen on the Structure of Electric Welds.