

magnitudes extending from 3.0 to 6.5 and gives reproducible results.—G. H. Dieke and G. B. Kistia-kowsky: The rotational structure of the ultra-violet absorption bands of formaldehyde. Photographs were taken in the third order of the 40-ft. spectrograph of the Loomis Laboratory, giving a dispersion of 0.4 Å. per mm.—P. S. Crowell: The ciliation of the oviducts of reptiles. In two lizards examined, there is a tract of cilia in the albumen-secreting region of the oviduct which probably convey sperms up the oviduct.—S. C. Lind and Charles Rosenblum: The combination of carbon monoxide and oxygen under the influence of radon. Carbon dioxide promotes the reaction, but only about 14.5 per cent of the ionisation is chemically effective. The recoil atom effect and the inverse square of the diameter law were also examined.—Ernst Cloos: 'Feather joints' as indicators of the direction of movements on faults, thrusts, joints, and magmatic contacts. These local joints are so named because they are arranged like the barbs of a feather; they frequently appear along boundaries of moved blocks, etc., and their position and direction indicate the nature of the movements which have taken place. Circular impressions were made on wet clay placed on two iron plates resting side by side. On moving one plate, the impressions are deformed, indicating the axis of strain, and tension joints, shear joints, etc., are formed. Parallel effects are observed in the field, suggesting that such laboratory experiments are useful imitations of natural conditions.—Charles N. Moore: On certain criteria for Fourier constants of  $L$  integrable functions.—I. A. Barnett and David Nathan: Sphere geometry and the conformal group in function space.—J. H. Roberts: Concerning unidirectional spaces.—J. Karamata: Remarks on a theorem of D. V. Widder.

### Forthcoming Events

#### MONDAY, OCT. 3

ROYAL SOCIETY OF ARTS (Special Meeting).—Robert Howden: "The Elimination of Reflections from Glazed Pictures in Galleries", at 3 P.M.

SOCIETY OF CHEMICAL INDUSTRY (Chemical Engineering Group, jointly with the London Section) (Jubilee Memorial Lecture).—Dr. G. D. Bengough: "The Corrosion of Metals in Salt Solutions and Sea-Water", at 8 P.M.

#### TUESDAY, OCT. 4

INSTITUTION OF HEATING AND VENTILATING ENGINEERS (Autumn Special Meeting).—Dr. H. M. Vernon: "The Measurement, in Relation to Human Comfort, of the Radiation Produced by Various Heating Systems", at 6.45 P.M.

#### WEDNESDAY, OCT. 5

SOCIETY OF PUBLIC ANALYSTS (Joint Meeting with the Food Group of the Society of Chemical Industry, at the Chemical Society's Rooms, Burlington House, Piccadilly, W.1).—Discussion on "The Changes in Fruit on Storage", at 8 P.M.

#### FRIDAY, OCT. 7

PHYSICAL SOCIETY (at the Imperial College of Science and Technology, South Kensington).—Dr. J. W. French: "The Manufacture of Optical Glass", at 5 P.M.

### Official Publications Received

#### BRITISH

Air Ministry: Aeronautical Research Committee: Reports and Memoranda. No. 1433: Corrosion Fatigue Test on Aluminium Crystal. By Dr. H. J. Grant and D. G. Sopwith. Pp. 30+12 plates. (London: H.M. Stationery Office.) 2s. 6d. net.  
Board of Education. Rules 101 (revised May 1932): Arrangements and Conditions for the Award of National Certificates and Diplomas in Building to Students in Technical Schools and Colleges in England and Wales. Pp. 7. (London: H.M. Stationery Office.) 2d. net.

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Dominion of Canada: National Research Council. Report No. 25: The Drying of Wheat (Second Report). By E. Stansfield and W. H. Cook. Pp. 104+2 plates. (Ottawa: F. A. Acland.)

Department of Scientific and Industrial Research. Building Science Abstracts. Vol. 5 (New Series), No. 7, July. Abstracts Nos. 1179-1351. Pp. 215-250. (London: H.M. Stationery Office.) 1s. net.

Geological Survey Department: Tanganyika Territory. Short Paper No. 10: The Kimberlite and Associated Occurrences of the Iramba Plateau. By Dr. E. O. Teale. Pp. ii+10. (Dar es Salaam: Government Printer.) 2s.

Colony of the Gambia. The Annual Report of the Department of Agriculture for the Year ended March 31st, 1932. Pp. 18. (Bathurst: Government Printer.) 8s.

Indian Central Cotton Committee: Technological Laboratory. Technological Bulletin, Series A, No. 21: Technological Reports on Standard Indian Cottons, 1932. By Dr. Nazir Ahmad. Pp. iv+109. (Bombay.) 2 rupees.

Tanganyika Territory: Department of Agriculture. Annual Report, 1930. Pp. 65. (Dar es Salaam: Government Printer.) 2s. 6d.

Bulletin of the Academy of Sciences of the United Provinces of Agra and Oudh, Allahabad, India. Vol. 1, 1931-32. Pp. iii+150+42+9 plates. (Allahabad.)

Annals of the Solar Physics Observatory, Cambridge. Vol. 2, Part 2: Stellar Hydrogen Line Contours and their Variation with Temperature and Surface Gravity. By E. G. Williams, under the direction of F. J. M. Stratton. Pp. vi+25-47+1 plate. (Cambridge: At the University Press.)

The Scientific Proceedings of the Royal Dublin Society. Vol. 20 (N.S.), No. 26: Factors which determine the Nutritive Value (Stock-carrying and Fattening Capacity) of Untreated Natural Pastures. By E. J. Sheehy. Pp. 325-346. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.) 2s.

Reports of the Imperial Economic Committee. Twenty-sixth Report: Constitution and Work, 1932. Pp. 16. (London: H.M. Stationery Office.) 6d. net.

Board of Trade. An Industrial Survey of the Lancashire Area (excluding Merseyside), made for the Board of Trade by the University of Manchester. Pp. ix+380. (London: H.M. Stationery Office.) 6s. net.

The Imperial College of Tropical Agriculture. Prospectus and Register. Pp. 24. (Trinidad, B.W.I., and London.)

The North of Scotland College of Agriculture. Calendar, Session 1932-1933. Pp. viii+120. (Aberdeen.)

#### FOREIGN

Bericht über den VIII. Internationalen Kongress für wissenschaftliche und angewandte Photographie, Dresden, 1931. Pp. vii+445+2 Tafeln. (Leipzig: Johann Ambrosius Barth.) 80 gold marks.

Report of the Danish Biological Station to the Ministry of Shipping and Fisheries. 37, 1932. By Dr. H. Blegvad. Pp. 94. (Copenhagen: C. A. Reitzel.)

Proceedings of the United States National Museum. Vol. 81, Art. 2: Birds collected in Cuba and Haiti by the Parish-Smithsonian Expedition of 1930. By Alexander Wetmore. (No. 2925.) Pp. 40+7 plates. (Washington, D.C.: Government Printing Office.)

U.S. Department of the Interior: Office of Education. Bulletin, 1932, No. 6: The County Superintendent in the United States. By Prof. Julian E. Butterworth. Pp. v+50. (Washington, D.C.: Government Printing Office.)

Division of Fish and Game of California: Bureau of Commercial Fisheries. Fish Bulletin No. 38: The California Shrimp Industry. By Paul Bonnot. Pp. 22. (Terminal, Calif.: California State Fisheries Laboratory.)

Bulletin of the American Museum of Natural History. Vol. 63, Art. 4: The Genus *Melipona*; the Type Genus of the Meliponidae or Stingless Bees. By Herbert F. Schwarz. Pp. 231-460+10 plates. (New York City.)

Proceedings of the American Philosophical Society. Vol. 71, No. 5. Pp. 225-307+11 plates. (Philadelphia.)

Proceedings of the Academy of Natural Sciences of Philadelphia, Vol. 84. The Birds of Honduras with Special Reference to a Collection made in 1930 by John T. Emlen, Jr., and C. Brooke Worth. By Witmer Stone. Pp. 291-342. Zoological Results of the Matto Grosso Expedition to Brazil in 1931. 1: Fresh Water Fishes. By Henry W. Fowler. Pp. 343-377. Notes on Fresh Water Fishes from Central America. By Henry W. Fowler. Pp. 379-385. (Philadelphia.)

Det Kgl. Danske Videnskabernes Selskab. Biologiske Meddelelser. 10, 5: Studier over *Incurvaria koernerella* Zell. (Lepidoptera, Incurvariidae). By Ad. S. Jensen. Pp. 49. (København: Bianco Lunos Bogtrykkeri A.S.)

U.S. Department of the Interior: Office of Education. Bulletin, 1932, No. 10: Physical Education and Health Education as a part of all General Teacher-Training Curricula. By Marie M. Ready. Pp. v+47. Bulletin, 1931, No. 20: Biennial Survey of Education in the United States, 1928-1930. Chapter 3: Statistics of City School Systems, 1929-1930. Pp. 231. Leaflet No. 42: Education in the Virgin Islands. By Arthur E. Lindborg. Pp. 4. 5 cents. (Washington, D.C.: Government Printing Office.)

Smithsonian Miscellaneous Collections. Vol. 87, No. 10: Lethal Action of Ultra-Violet Light on a Unicellular Green Alga. By Florence E. Meier. (Publication 8173.) Pp. 11+2 plates. (Washington, D.C.: Smithsonian Institution.)

Cornell University: Agricultural Experiment Station. Bulletin 583: Production and Marketing of Field Beans in New York. By H. N. Young. Pp. 203. Memoir 139: An Analysis of the Characters of the Inflorescence and the Fruiting Habit of some Varieties of Greenhouse Tomatoes. By A. G. F. Bouquet. Pp. 42. Memoir 141: Multiple Correlation Analysis as applied to Farm-Management Research. By Stanley W. Warren. Pp. 37. (Ithaca, N.Y.)

Proceedings of the United States National Museum. Vol. 80, Art. 29: Revision of the Nearctic Ichneumon-Flies belonging to the Genus *Macrocentrus*. By C. F. W. Muesebeck. (No. 2923.) Pp. 55. (Washington, D.C.: Government Printing Office.)

Forty-seventh Annual Report of the Bureau of American Ethnology, 1929-1930. Pp. vii+1108+61 plates. (Washington, D.C.: Smithsonian Institution.)

Carnegie Institution of Washington. Contributions to Embryology. Vol. 23, Nos. 134-138. Pp. iii+267+27 plates. (Washington, D.C.: Carnegie Institution.)