

tive modifications produced by X-rays in the mitotic activity of these tissues are then studied experimentally and analytically. Within certain limits, the experimental results are in good agreement with the predictions of analysis. Outside these limits there is, in some experiments, a marked divergence between the two. The significance of this divergence is considered, and an explanation, supported by experimental evidence that seems conclusive, is advanced.—J. C. Earl and N. F. Hall: The chemical changes involved in the formation of aminoazo-compounds (1). By examining the volume-temperature curves of methanol solutions containing amine hydrochlorides and sodium nitrite, an indication has been obtained of an intramolecular rearrangement of amine nitrite to an intermediate compound prior to the formation of diazocompound or nitrosamine. When the solution is kept neutral by employing equimolecular proportions of amine hydrochloride and sodium nitrite, the change does not take place, nor, in the case of aniline, does the solution show any coupling with alkaline  $\beta$ -naphthol. Addition of a small quantity of acid to such a mixture brings about the formation of diazocompound as shown by the coupling reaction with  $\beta$ -naphthol (cf. Wallach, *Annalen*, 257, 319).—Thelma M. Reynolds: Note on the action of titanium tetrachloride on tetracetyl- $\beta$ -*d*-glucosido-glycollic ester. Tetracetyl- $\beta$ -*d*-glucosido-glycollic ester (Fischer and Helferich, *Annalen*, 383, 81; 1911) reacts with titanium tetrachloride in the same manner as the fully acetylated sugars (Pacsu, *Ber.*, 61, 1508; 1928) giving acetochloroglucose, whereas the  $\beta$ -glucosides previously studied (Pacsu, *loc. cit.*; *J. Amer. Chem. Soc.*, 52, 2563; 1930) were rearranged into the corresponding  $\alpha$ -glucosides.

### Forthcoming Events

#### MONDAY, OCT. 17

- KING'S COLLEGE, LONDON.—Prof. Claude F. A. Schaeffer: "The Excavations at Ras Shamra in Syria—the Results of the Four First Expeditions, 1929–32", at 5.30 (succeeding lectures on Oct. 20 and 21).
- LONDON SCHOOL OF HYGIENE AND TROPICAL MEDICINE (Heath Clark Lectures).—Prof. Carl Prausnitz: "The Teaching of Preventive Medicine in Europe", at 5 P.M. (succeeding lectures on Oct. 18, 19, 20 and 21).

#### TUESDAY, OCT. 18

- EUGENICS SOCIETY—(at the rooms of the Linnean Society, Burlington House, Piccadilly, W.1).—Dame Helen Gwynne-Vaughan: "The Contribution of Plants to the Study of Heredity", at 5.30 P.M.
- HACKNEY AND NEW COLLEGE, LONDON.—(Drew-Lecture at the Memorial Hall, Farringdon Street).—Prof. John Macmurray: "The Conservation of Personality."
- IMPERIAL COLLEGE OF SCIENCE AND TECHNOLOGY.—Air Commodore J. A. Chamier: "Air Power", at 5.30 P.M. (succeeding lectures on Oct. 25, Nov. 1, 8, 15 and 22).
- UNIVERSITY OF LEEDS.—Prof. John Garstang: "Further Discoveries at Jericho", at 8 P.M.
- ROYAL COLLEGE OF PHYSICIANS—(Harveian Oration).—Sir George Newman, at 4 P.M.

#### WEDNESDAY, OCT. 19

- FOLK-LORE SOCIETY—(at University College, Gower Street, W.C.1).—Mr. Bertram Thomas: "Arab Folk Stories Heard in the Rub' al Khali", at 8 P.M.

#### THURSDAY, OCT. 20

- BEDFORD COLLEGE FOR WOMEN—(Fawcett Lecture).—Dr. C. R. Fay: "Women as Wage-earners and the Significance thereof in the Development of Economic Theory", at 5.15 P.M.

CHADWICK PUBLIC LECTURE—(at the Royal United Services Institution, Whitehall).—Sir Humphry Rolleston, Bart.: "The Pioneers and Progress of Preventive Medicine", at 5.15 P.M.

CHILD STUDY SOCIETY, LONDON—(Cockburn Memorial Lecture).—Dr. P. B. Ballard: "Thirty Years' Progress in London Education", at 6 P.M.

INSTITUTION OF ELECTRICAL ENGINEERS—(Inaugural Address).—Prof. E. W. Marchant, at 6 P.M.

#### FRIDAY, OCT. 21

NORTH EAST COAST INSTITUTION OF ENGINEERS AND SHIPBUILDERS—(Annual General Meeting).—Mr. R. J. Walker (Presidential Address).

### Official Publications Received

#### BRITISH

Colony and Protectorate of Nigeria. Annual Report on the Geological Survey for the Year 1931. Pp. ii+40+4 maps. (Lagos: C.M.S. Bookshop; London: The Crown Agents for the Colonies.) 2s. 6d. net.

Ordnance Survey. Re-Levelling of London, commenced January, 1931. Abstracts of Secondary Lines (giving Values in Advance of publication, on the Newlyn Datum, for use with existing Large Scale Maps.) By Brigadier H. St. J. L. Winterbotham. Pp. 51+1 plate. (Southampton: Ordnance Survey Office.) Paper, 7s. 6d. net; cloth, 8s. 6d. net.

Battersea Polytechnic. Calendar of Evening and Afternoon Courses and Classes for Session 1932–33. Pp. 31. Free. Technical College for Day Students and Day School of Art and Crafts. Calendar, Session 1932–33. Pp. 50. 3d. Domestic Science Department and Training College. Full-time Day Instruction, Afternoon and Evening Classes, Session 1932–33. Pp. 32+1 plate. 3d. Department of Hygiene and Public Health. Session 1932–1933. Pp. 23. 3d. (London.)

The Quarterly Journal of the Geological Society of London. Vol. 88, Part 3, No. 351, August 29th. Pp. 311–515+plates 19–30+cxv. (London: Longmans, Green and Co., Ltd.) 7s. 6d.

The Year's Work in Librarianship. Vol. 4, 1931. Edited for the Library Association by Arundell Esdalle. Pp. vii+296+4 plates. (London: The Library Association.) 7s. 6d. net; to Members, 5s. net.

East London College (University of London.) Calendar, Session 1932–1933. Pp. 211. (London.) 1s.

Advisory Department of the Imperial College of Tropical Agriculture. Report on the Agricultural Department, St. Vincent, for the Year 1931. Pp. vi+32. (Trinidad.) 6d.

Papers and Proceedings of the Royal Society of Tasmania for the Year 1931. Pp. iv+136+19 plates. (Hobart: Tasmanian Museum.) 10s.

Advisory Department of the Imperial College of Tropical Agriculture. Report on the Agricultural Department, St. Lucia, 1931. Pp. iv+43. (Trinidad.) 6d.

University of London: University College Faculty of Medical Sciences, University Centre for Preliminary and Intermediate Medical Studies. Courses for Dental Students, Session 1932–1933. Pp. vi+269–304+12. (London.)

#### FOREIGN

Scientific Papers of the Institute of Physical and Chemical Research. Nos. 373–375: Hyperfine structure of Mercury Spectrum, VI, by K. Murakawa; Hyperfine Structure of Arc and Spark Spectra of Barium, by K. Murakawa; Diffraction of Cathode Rays by Single Crystals, Part 2: Mean Inner Potentials of some Crystals, by K. Shinohara. Pp. 299–322+plates 11–13. 35 sen. No. 376: Über Rotenon, den Wirksamen Bestandteil der Derriswurzel, Mitteilung I–XIII. Von S. Takei, S. Miyajima und M. Ono. Pp. 26. 20 sen. (Tokyo: Iwanami Shoten.)

University of Chicago. Publications of the Yerkes Observatory, Vol. 7, Part 2: A Study of the Spectrum of  $\zeta$  Aurigae, by Edwin B. Frost, Otto Struve and C. T. Elvey. Pp. vi+52+3 plates. (Chicago: University of Chicago Press; London: Cambridge University Press.) 8s. 6d. net.

Conseil Permanent International pour l'Exploration de la Mer. Journal du Conseil. Vol. 7, No. 2. Rédigé par E. S. Russell. Pp. 171–336. (Copenhagen: Andr. Fred. Høst et fils.)

Museums of the Brooklyn Institute of Arts and Sciences. Report upon the Condition and Progress of the Museums for the Year ending 31st December, 1931. By William Henry Fox. Pp. 86+4 plates. (Brooklyn, N.Y.)

Field Museum of Natural History. Zoological Series, Vol. 18, No. 10: Mammals of the Kelley–Roosevelts and Delacour Asiatic Expeditions. By Wilfred H. Osgood. (Publication 312.) Pp. 191–339+plates 9–11. (Chicago.) 75 cents.

Report of the Aeronautical Research Institute, Tokyo Imperial University. No. 80: Studies on the Sounds emitted by Revolving Airscrews. Part 2: Experiments with Model Airscrews. By Jūichi Obata, Yakei Yosida and Sakae Morita. Pp. 389–440. 0.67 yen. No. 81: On Hollow Spindle-shaped Liquid Jet. By Kyōzi Itō. Pp. 441–467+8 plates. 0.50 yen. (Tōkyō: Kōseikai Publishing House.)

Proceedings of the United States National Museum. Vol. 80, Art 21: Insects of the Order Orthoptera of the Pinchot Expedition of 1929. By A. N. Caudell. (No. 2921.) Pp. 7. (Washington, D.C.: Government Printing Office.)

Proceedings of the Imperial Academy. Vol. 8, No. 7, July. Pp. xix–xx+275–329. (Tokyo.)