

WASHINGTON, D.C.

National Academy of Sciences (*Proc.*, 21, 181-234, April 15). CARLETON R. BALL: New varieties of Western [American] willows. LINUS PAULING: The oxygen equilibrium of hæmoglobin and its structural interpretation. Assuming that the hæmoglobin molecule contains four equivalent 'hæmes', one equation involving two constants is derived which represents the oxygen equilibrium at constant hydrogen ion concentration, and another similar equation which represents the change of oxygen equilibrium with change of hydrogen ion concentration. These equations give curves agreeing well with experimental curves; they support the view that the four 'hæmes' lie at the corners of a square. B. S. HENRY and A. M. PARTANSKY: The rate and extent of anaerobic decomposition of sulphite waste liquor by bacteria of sea bottom mud. (2) Bacteriological. A number of anaerobic and facultative bacteria were isolated; they seem to be new species. Sulphite waste liquor slows down the growth and fermentation of nine common micro-organisms tried; it is fermented to only a limited extent by these organisms. C. C. TAN: Identification of the salivary gland chromosomes in *Drosophila pseudo-obscura*. CURT STERN: The behaviour of unstable genic loci—a hypothesis. The unstable locus is assumed to be a composite of a gene in its normal locus and its mutant allelomorph laterally attached next to it, the effect being different from that produced when the two genes are located in different chromosomes. J. T. BUCHHOLZ, A. F. BLAKESLEE and A. G. AVERY: Pollen-tube growth of a translocation of the 1·2 chromosome in *Datura*. Translocation was produced by exposure of pollen tubes to radon during their passage through the style. Reduction in rate of growth of pollen tubes from plants carrying the extra chromosomal material appears to occur and is roughly proportional to the amount of extra material present. CHESTER STROCK: Insectivora from the Sespe uppermost Eocene, California. S. LEFSCHETZ: Application of chain-deformations to critical points and extremals. J. W. ALEXANDER: Note on Pontrjagin's topological theorem of duality. SUMNER BYRON MYERS: Connexions between differential geometry and topology. A. G. MARSHAK: The sensitive-volume of the meiotic chromonemata of *Gasteria* as determined by irradiation with X-rays. The inflorescence of *Gasteria* provides a regular sequence of buds, so that the effect of irradiation can be determined at various periods after exposure. The frequency of effects are proportional to dosage of radiation. Using Glocker's equation for the number of photo-electrons traversing a given volume, and measuring the volume of the nucleus and bivalent chromosome of *Gasteria*, the observed frequency of induced abnormalities enables the width of the sensitive portion of the half-chromosome to be estimated and eventually that of the single chromatid. The figures obtained agree well with those obtained from the diameters of simple protein molecules. R. E. BOWEN: Movement of sensory hairs in the ear. The author has previously reported movements of hair in the ear of the catfish. Observations are now recorded of regular movements of the sensory hairs in the ears of two marine teleostian fish, the squirrel fish and the striped grunt.

Forthcoming Events

[Meetings marked with an asterisk are open to the public.]

Sunday, July 21

BRITISH MUSEUM (NATURAL HISTORY) at 3 and 4.30.—
Mr. M. A. Phillips: "British Mammals".

INTERNATIONAL SOCIETY OF EXPERIMENTAL PHONETICS,
July 22-26.—Meeting to be held in London. One joint session to be held with the second International Congress of the Phonetic Sciences.

ELECTRODEPOSITION EXHIBITION, at the Science Museum,
South Kensington, July 25-October.
July 25, at 3.—Opening by Lord Melchett.

Official Publications Received

Great Britain and Ireland

Poison Gas. Pp. 64. (London: Union of Democratic Control.) 6d.
University of London Council for Psychical Investigation. Bulletin 1: Supplement to Short-Title Catalogue of Works on Psychical Research, Alleged Abnormal Phenomena, Spiritualism, Magic, Witchcraft, Legerdemain, Charlatanism and Astrology, from 1472 A.D. to the Present Time. Compiled by Harry Price. Pp. 112. (London: University of London Council for Psychical Investigation.) 2s. 6d. net.
Committee on Bird Sanctuaries in Royal Parks (England). Report for 1934. Pp. 24. (London: H.M. Stationery Office.) 6d. net.
Report on the Phenological Observations in the British Isles from December 1933 to November 1934. By J. Edmund Clark, Ivan D. Margary and C. J. P. Cave. (No. 44.) (Quarterly Journal of the Royal Meteorological Society, No. 260, Vol. 61.) Pp. 231-284. (London: Royal Meteorological Society.) 3s.

Other Countries

India Meteorological Department. Scientific Notes, Vol. 6, No. 63: Wind Data for Wind Mills. By V. Doraiswamy Iyer. Pp. 57-85+7 plates. (Delhi: Manager of Publications.) 1.6 rupees; 2s. 3d.
Smithsonian Miscellaneous Collections. Vol. 93, No. 6: Ear Exostoses. By Aleš Hrdlička. (Publication 3296.) Pp. iv+100+5 plates. Vol. 94, No. 2: Concerning the Badianus Manuscript, an Aztec Herbal, "Codex Barberini, Latin 241" (Vatican Library). By Emily Walcott Emmart. (Publication 3329.) Pp. iii+14+4 plates. Vol. 94, No. 3: Thomas Lincoln Casey and the Casey Collection of Coleoptera. By L. L. Buchanan. (Publication 3330.) Pp. iv+15+1 plate. (Washington, D.C.: Smithsonian Institution.)
U.S. Treasury Department: Public Health Service. Time Distribution of Common Colds and its relation to corresponding Weather Conditions. By Mary Gover, Lowell J. Reed and Selwyn D. Collins. (Reprint No. 1634 from the Public Health Reports.) Pp. 14. 5 cents. Further Studies on Growth and the Economic Depression: a Comparison of Weight and Weight Increments of Elementary-School Children in 1921-27 and in 1933-34. By Dr. Carroll E. Palmer. (Reprint No. 1660 from the Public Health Reports.) Pp. 17. 5 cents. (Washington, D.C.: Government Printing Office.)
Bulletin of Yale University. Report of the Director of Peabody Museum for the Academic Year 1933-1934. Pp. 35. (New Haven, Conn.: Yale University.)
U.S. Department of the Interior: Office of Education. Bulletin, 1934, No. 19: The Problem of Duplication as attacked in certain State Surveys of Higher Education. By John H. McNeely. Pp. v+50. 5 cents. Leaflet No. 45: Federal Grants for Education, 1933-34. By Timon Covert. Pp. 14. 5 cents. Pamphlet No. 61: Per Capita Costs in City Schools, 1933-34. By Lulu Mae Comstock. Pp. 19. 5 cents. (Washington, D.C.: Government Printing Office.)
Field Museum of Natural History. Publication 346: Culture Areas of Nigeria. By Wilfrid D. Hambly. (Frederick H. Rawson—Field Museum Ethnological Expedition to West Africa, 1929-30.) (Anthropological Series, Vol. 21, No. 3.) Pp. 363-502+plates 93-160. (Chicago: Field Museum of Natural History.) 2 dollars.
Proceedings of the American Academy of Arts and Sciences. Vol. 70, No. 3: Measurements of certain Electrical Resistances, Compressibilities and Thermal Expansions to 20,000 kg/cm². By P. W. Bridgman. Pp. 71-101. 75 cents. Vol. 70, No. 4: The Lower Permian Insects of Kansas. Part 7: The Order Protheropleria. By Frank M. Carpenter. Pp. 103-146+2 plates. 90 cents. (Boston, Mass.: American Academy of Arts and Sciences.)
Reports of the Institute for Science of Labour. No. 25: General Intelligence Test and its Norm. 1: Standardization of Intelligence Tests for Children, Adolescents and Adults; 2: Mental Development of the Japanese. By Dr. Hōken Kirihara. Pp. 22. 50 sen. No. 26: A Study of the Physical Sport-Types of the Japanese. By Dr. Takatugu Yagi. Pp. 17. 30 sen. No. 27: Experimental Studies on the Day and Night Inversion of Daily Routine. By Dr. Tomoyosi Isikawa. (Supplemental Report to the No. 3 Report.) Pp. 14. 30 sen. No. 28: Raftachometer, an Instrument for Measuring Atmospheric Cooling Power. By Dr. Syuzō Eda and Dr. Sinzi Katuki. Pp. 9. 25 sen. No. 29: 1. Sex-Ratio in the Population of Japan Proper; 2. The Influence of Industrialism upon the Mortality of Young People and Adults. By Dr. Sinzi Katuki. Pp. 30. 60 sen. No. 30: Adaptation and Revision of Non-Verbal Will-Temperament Test. By Dr. Hōken Kirihara. Pp. 14. 30 sen. (Kurasiki: Institute for Science of Labour.)