

overgrowth of periosteal bone was found to explain destruction of other peripheral afferent nerves. Many other abnormalities of the nervous system resulted from the same cause, including deformity of the cerebellum and medulla, increased intracranial pressure, internal hydrocephalus, reduction of the sub-arachnoid space and of the cerebrospinal fluid, and the squeezing of the whole of the central nervous system in its bony covering.

The investigation had now come back to its starting point, namely, bone development, since it was obvious that the essential problem, although associated with such drastic nervous defects, was largely one of abnormal bone growth. In the absence of vitamin A and carotene, bone growth in certain positions was excessive. Whereas it was shown in the earlier work that the antirachitic vitamin (now vitamin D) controlled the hardening of bone, it was now evident that vitamin A restrained the bone cell elements in some way, so that in its absence there was loss of normal bone shape and also of co-ordination of its growth in relation to that of the enclosed central nervous system. Although many of the essential facts of the relation of vitamin A to bone morphogenesis are still unknown, some recent results on this problem were described.

## FORTHCOMING EVENTS

(Meetings marked with an asterisk \* are open to the public)

### Saturday, July 24

INSTITUTE OF PHYSICS (Midland Branch) (at the University, Edmund Street, Birmingham), at 2.30 p.m.—Lectures by Prof. R. Peierls and Dr. L. Jánossy on "The Meson".\*

### Wednesday, July 28

ZOOLOGICAL SOCIETY OF LONDON (in the Meeting Room, Regent's Park, London, N.W.8), at 3 p.m.—Sir John Graham Kerr, F.R.S.: "A Naturalist in the Gran Chaco, South America".\*

## APPOINTMENTS VACANT

APPLICATIONS are invited for the following appointments on or before the dates mentioned:

ASSISTANT MASTER OR MISTRESS TO TEACH MAINLY GENERAL SCIENCE in the Junior Technical Schools, Bath Technical College—The Director of Education, Education Department, Guildhall, Bath (July 30).

JOHNSTON CHAIR OF BIOCHEMISTRY—The Registrar, The University, Liverpool (July 31).

LECTURER IN THE DEPARTMENT OF CHEMISTRY—The Principal, Derby Technical College, Normanton Road, Derby (July 31).

VETERINARY INSPECTORS (TEMPORARY) in the Ministry of Agriculture and Fisheries—The Ministry of Labour and National Service, Central (Technical and Scientific) Register (Reference No. ONF. 1399), Alexandra House, Kingsway, London, W.C.2 (August 2).

DEMONSTRATOR (MALE OR FEMALE) IN ANATOMY—The Registrar, The University, Sheffield (August 2).

SPEECH THERAPIST—The Secretary to the Chesterfield and Mansfield Education Committees, Education Offices, Mansfield (August 3).

HEAD OF THE BUILDING DEPARTMENT—The Registrar, Technical College, Sunderland (August 6).

LECTURER (MAN) IN SCIENCE (PHYSICS AND CHEMISTRY)—The Principal, Borough Road College, Isleworth, Middlesex.

TEACHER OF ENGINEERING WORKSHOP PRACTICE in the Smethwick Junior Technical School—The Chief Education Officer, Education Offices, 215 High Street, Smethwick 41.

SCIENCE MASTER TO TEACH MAINLY BIOLOGY in connexion with a Pre-Agricultural Course for Boys at the Maidstone Technical Institute—The District Secretary, Kent Education Committee, 13 Tonbridge Road, Maidstone.

RESEARCH CHEMISTS, PHYSICISTS AND FUEL TECHNOLOGISTS for research and development work in connexion with the Ceramic Industry—The Director of Research, British Pottery Research Association, Queens Road, Penkhull, Stoke-on-Trent.

LECTURER IN THE MATHEMATICS DEPARTMENT—The Principal, Heriot-Watt College, Edinburgh.

VISITING LECTURER IN PSYCHOLOGY—The Secretary, King's College of Household and Social Science, c/o University College, Leicester.

## REPORTS and other PUBLICATIONS

(not included in the monthly Books Supplement)

### Great Britain and Ireland

Education and Training for Engineers. Pp. ii+22. (London: Institution of Electrical Engineers.) [226]

Geological Survey of Great Britain: Scotland, Wartime Pamphlet No. 34: Commercial Mica in Scotland. Part 1: Characteristics of Commercial Mica. By Dr. W. Q. Kennedy. Pp. 14. (London: Geological Survey and Museum.) 9d. [286]

Lister Institute of Preventive Medicine. Report of the Governing Body, 1943. Pp. 24. (London: Lister Institute.) [286]

Association of Polish University Professors and Lecturers in Great Britain. Professor Bronislaw Malinowski: an Account of the Memorial Meeting held at the Royal Institution in London on July 13th, 1942. Pp. 24. (London: Oxford University Press.) 1s. net. [296]

The British Council. Report for 1942-1943. Pp. 108. (London: British Council.) [306]

Colonial Office. Labour Supervision in the Colonial Empire, 1937-1943. (Colonial No. 185.) Pp. ii+26. (London: H.M. Stationery Office.) 6d. net. [127]

Abstracts of Dissertations approved for the Ph.D., M.Sc., and M.Litt. Degrees in the University of Cambridge during the Academic Year 1941-1942. Pp. 72. (Cambridge: At the University Press.) [137]

Ministry of Fuel and Power: Committee on the Efficient Use of Fuel. Fuel Efficiency Bulletin No. 20: Cooling Firebars in Industrial Furnaces and Boilers. (F.E.C.172.) Pp. 12. (London: Ministry of Fuel and Power.) [137]

The Farm Tractor. Pp. 40. (York: National Institute of Agricultural Engineering.) 9d. [137]

W.E.A. Educational Pamphlets. No. 1: Plan for Education; a Programme of Educational Reconstruction. Pp. 34. 6d. No. 3: The Education and Training of Teachers; a Memorandum submitted in Evidence to the Departmental Committee under the Chairmanship of Dr. A. D. McNair by the Workers' Educational Association. Pp. 20. 6d. No. 4: Agriculture and Rural Education; a Statement submitted to Mr. Justice Luxmoore's Committee. Pp. 22. 6d. (London: Workers' Educational Association.) [137]

### Other Countries

Ministry of Public Works, Egypt: Physical Department. Physical Department Paper No. 44: Notes on the Flow of Viscous Fluids; a Series of Six Notes presenting New Lines of Approach to Various Aspects of Fluid Motion, mainly with reference to the Flow of Water. By A. Fathy, Dr. S. Bishara and S. A. M. Hassanein. Pp. xi+90. (Cairo: Government Press.) [256]

Commonwealth of Australia: Council for Scientific and Industrial Research. Bulletin No. 154: The Handling and Storage of Australian Oranges, Mandarins, and Grapefruit. Compiled by Dr. F. E. Huelin. (Report of Investigations carried out under the direction of the Citrus Preservation Technical Committee from 1935 to 1941.) Pp. 60+3 plates. Bulletin No. 156: Standardized Plant Names; a List of Standard Common Names for the More Important Australian Grasses, other Pasture Plants, and Weeds. Pp. 99. (Melbourne: Government Printer.) [286]

Brooklyn Botanic Garden Record. Vol. 32, No. 2: Thirty-second Annual Report of the Brooklyn Botanic Garden, 1942. Pp. viii+43-164. (Brooklyn, N.Y.: Brooklyn Institute of Arts and Sciences.) [137]

Jamaica. Annual Report of Forest Division, Department of Agriculture, for Year ending March 31st, 1942 (Abbreviated Report). Pp. 8. (Kingston: Department of Agriculture.) [137]

Bulletin of the Experiment Station of the Hawaiian Sugar Planters' Association. Entomological Series, Bulletin No. 22: The Coccinellidae or Ladybeetles of the Koebele Collection, Part 1. By P. H. Timberlake. Pp. 67. (Honolulu: Hawaiian Sugar Planters' Association.) [137]

U.S. Department of Agriculture. Circular No. 671: Sampling Technique for Determining Populations of the Citrus Red Mite and its Predators. By Chas. F. Henderson and Horace V. McBurnie. Pp. 12. 5 cents. Farmers' Bulletin No. 1930: Prevention and Control of Alfalfa Weevil Damage. By J. C. Hamlin, W. C. McDuffie and F. V. Lieberman, and R. W. Bunn. Pp. ii+14. 5 cents. Leaflet No. 226: The Pepper Weevil. By J. C. Elmore. Pp. 8. (Washington, D.C.: Government Printing Office.) [137]

Annals of the New York Academy of Sciences. Vol. 44, Art. 1: Boundary-Layer Problems in the Atmosphere and Ocean. By C.-G. Rossby, B. Haurwitz, Benjamin Holzman, Woodrow C. Jacobs, A. A. Kahlneke, Phillip Light, R. B. Montgomery and H. U. Sverdrup. Pp. 104. (New York: New York Academy of Sciences.) [137]

Cornell University Agricultural Experiment Station. Bulletin 786: Population Trends in New York State, 1900 to 1940. By W. A. Anderson. Pp. 72. Bulletin 787: Effects of Daylength and Temperature on Growth and Flowering of some Florist Crops. By Kenneth Post. Pp. 70. Bulletin 788: Fusarium Wilt of Carnations caused by *Fusarium Dianthi* Prill. et Del. By J. M. Bickerton. Pp. 32. Bulletin 789: Soil and Field-Crop Management for the Catskill-Mohawk Area of New York. By A. F. Gustafson. Pp. 32. Memoir 248: Studies with Silver Compounds and Mixtures as Fungicidal Sprays. By Lowell W. Nielsen. Pp. 44. Memoir 249: The Effect of Various Dilutors, Cooling Rate, Temperature of Storage, and some other Factors, on the Livability of Spermatozoa in Stored Samples of Bull Semen. By E. L. Willett and G. W. Salisbury. Pp. 46. (Ithaca, N.Y.: Cornell University Agricultural Experiment Station.) [137]

### Catalogue

Scientific and Medical Books, with an Interesting Collection of Newtoniana and many Items of General Interest. (Catalogue N.S. 52.) Pp. 36. (London: Wm. Dawson and Sons, Ltd.)