

types of sex chromosomes have been found in *Pteromales puparum* and this supports Whiting's hypothesis of sex determination in Hymenoptera. L. DOBRUNOV: Problem of the relation of plants to the concentration of nitrogen in the nutrient solution. Not only different species but also different varieties of the same species respond in a different way to the variation in the concentration of nitrogen in solution. I. VASILJEV: On factors of yarovisation of winter varieties. The method of Lysenko is not the only and not the best one by which winter varieties of wheat can be made to mature in the same year. The possibilities for accomplishing this are much more varied. V. CERLING and A. CHEPIKOVA: On the types of the yarovisation process (2). It appears that the yarovisation stage is a gradual process of the formation of new qualities with the accumulation of quantitative changes, rather than an immediate accession of new properties. E. SOZNIKOV: Production of citric acid by the fungus *Aspergillus niger* (3). I. KOZHANCHIKOV: Water balance of the pupæ of *Agrotis* and *Ephestia* as a reaction to the humidity of the environment.

MELBOURNE

Royal Society of Victoria, October 11. G. W. LEEPER: Manganese deficiency of cereals: plot experiments and a new hypothesis. Experiments on an overlimed soil showed that $MnSO_4$ applied with the seed was beneficial, but sulphur in amounts sufficient to bring the pH below 6.7 gave the best yields of wheat grain. Healthy alkaline soils differ from deficient soils in containing large reserves of 'active MnO_2 ' which are soluble in a 0.2 per cent solution of quinol in normal ammonium acetate at pH 7.0. This active MnO_2 is directly available to plants, whether in the colloidal state or by reduction at the root-soil interface (see NATURE, Dec. 22, p. 972). JEAN PHILLIPSON: Some algæ of Victorian soils. Thirty-four species of algæ have been identified from the Victorian soils, including nine Myxophyceæ, eighteen Chlorophyceæ, five Heterokontæ and two Diatoms. W. J. HARRIS and D. E. THOMAS: Victorian graptolites (n.s.) (3). A descriptive paper dealing mainly with Upper Darriwilian forms. W. J. HARRIS: The graptolite succession of Bendigo East, with suggested zoning. Attention is concentrated on the beds east of the Whitelaw fault, and it is shown that there is a succession descending towards the east from this line. The Uppermost Darriwilian zone (D 1) is divided into two zones, (a) with *Diplograptus* (? *Mesograptus*) *decoratus*, Harris and Thomas, and *Didymograptus nodosus*, Harris, as zonal fossils; and (b) with *Diplograptus* (*Glyptograptus*) *intersitus*, H. and T., and *Didymograptus compressus*, H. and T., the former being the higher. The zones between that marked by the incoming in force of *Diplograptus* (D 2) and of the Dieranograptidæ are grouped as a *Diplograptus* series, and a suggestion is made for the grouping of lower zones according to the chief features of their graptolite assemblages. LEO W. STACH: Victorian Lower Pliocene Bryozoa (1). Twenty-two species of Bryozoa are recorded from Macdonald's locality on Muddy Creek, one, *Otionella grandipora*, being new. All except *Arachnopsis terminata*, Waters, are recent forms, eight of which are initially recorded as fossils, the remainder ranging from the Lower Miocene to the present day. Six species of the Catenicellidæ are recorded, constituting the first record of this group in the Lower Pliocene.

Forthcoming Events

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

Sunday, January 6

BRITISH MUSEUM (NATURAL HISTORY), at 3 and 4.30.—Capt. Guy Dollman: "British Mammals".*

Monday, January 7

SOCIETY OF CHEMICAL INDUSTRY (LONDON SECTION), at 8—(at the Chemical Society, Burlington House, London, W.1).—Prof. T. P. Hilditch: "The Fats: New Lines in an Old Chapter of Organic Chemistry" (Jubilee Memorial Lecture).

ROYAL GEOGRAPHICAL SOCIETY, at 8.30.—A. M. Champion: "Teleki's Volcano".

Thursday, January 10

INSTITUTION OF ELECTRICAL ENGINEERS, at 6.—A. Monkhouse: "Electrical Developments in the U.S.S.R."

ROYAL EMPIRE SOCIETY (EDUCATION CIRCLE), at 8.—Discussion on "The Background of Education in Papua", to be opened by the Hon. R. L. Turner.

MATHEMATICAL ASSOCIATION, January 7–8. Annual meeting to be held at the Institute of Education, Southampton Row, W.C.1.

A. W. Siddons: "The Food of the Gods" (Presidential Address).

Official Publications Received

GREAT BRITAIN AND IRELAND

Report of the Committee appointed by the Physical Society to consider and make Recommendations on the Teaching of Geometrical Optics. Pp. v+86. (London: Physical Society.) 6s. net. University of Bristol. Annual Report of Council to Court, 1933–34. Pp. 48. (Bristol.)

List of Geological Literature added to the Geological Society's Library during the Year 1933. Compiled by the Library Staff. (No. 36.) Pp. iv+303. (London: Geological Society.) 10s.

Tropical Diseases Bulletin. Vol. 31. Supplement: Medical and Sanitary Reports from British Colonies, Protectorates and Dependencies for the Year 1932. Summarized by Dr. H. Harold Scott. Pp. 219. (London: Bureau of Hygiene and Tropical Diseases.) 5s. net. Amgueddfa Genedlaethol Cymru: National Museum of Wales. Twenty-seventh Annual Report, 1933–34, presented by the Council to the Court of Governors on the 26th October 1934. Pp. 42. (Cardiff.)

OTHER COUNTRIES

Memoirs of the Geological Survey of India. Palæontologia Indica, New Series, Vol. 21, Memoir No. 2: Cambrian and Ordovician Fossils from Kashmir. By Dr. F. R. Cowper Reed. Pp. vi+38+2 plates. (Calcutta: Geological Survey.) 2.8 rupees; 4s. 6d.

Report of the First Scientific Expedition to Manchoukuo under the Leadership of Shigeyasu Tokunaga, June–October 1933. Section 1: Natural Science Research of the First Scientific Expedition to Manchoukuo. By Shigeyasu Tokunaga. Pp. iii+76+69 plates. Section 4, Part 1: Plantæ Novæ Jeholenses, I. By Takenoshin Nakai and Masao Kitagawa. Pp. iv+71+20 plates. Section 5, Part 1: The Fresh Water Fishes of Jehol. By Tamezo Mori. Pp. ii+61+21 plates. (Tokyo: Waseda University.)

Harvard Meteorological Studies published by the Blue Hill Meteorological Observatory of Harvard University. No. 2: Subsidence within the Atmosphere. By Jerome Namias. Pp. 61+3 plates. (Cambridge, Mass.: Harvard University Press.)

School of Tropical Medicine, San Juan, Puerto Rico. Report of the Director for the Year ending June 1934. Pp. 67. (San Juan: University of Puerto Rico.)

Canada: Department of Mines: Geological Survey. Memoir 173: Slocan Mining Camp, British Columbia. By C. E. Cairnes. (No. 2358.) Pp. iv+137+13 plates. 50 cents. Memoir 174: Surface Deposits and Ground-water Supply of Winnipeg Map-area, Manitoba. By W. A. Johnston. (No. 2363.) Pp. v+110. 25 cents. (Ottawa: King's Printer.)

Dominion of Canada. Report of the Department of Mines for the Fiscal Year ending March 31, 1934. (No. 2360.) Pp. iii+44. (Ottawa: King's Printer.) 25 cents.

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