

piñon and Douglas fir; the dating is by matching annual ring patterns in timber with those of recently cut trees. IAN CAMPBELL and JOHN H. MAXSON: Some observations on the Archean metamorphics of the Grand Canyon. Field work indicates that the great body of the Vishnu schist is sedimentary in nature, probably laid down in a shallow, subsiding geosyncline. The higher degree of metamorphism found may be due to contact rather than to regional effects. WILLIAM ALBERT SETCHELL: A preliminary survey of the species of *Zostera*. A discussion of the diagnostic features of the eel-grasses, with a provisional key. F. ZWICKY: Remarks on superconductivity. Superconductivity is connected with the structure-sensitive properties of crystals, and the occurrence of characteristic lengths of the order of 10^{-4} cm. and of one or more sharp transition points (co-operative phenomena). These phenomena can be discussed in terms of the interaction of ion-lattice and electron-lattice in a metal. F. A. MCJUNKIN and C. D. HARTMAN: Concentration and purification of a growth inhibitor extracted from kidney: a preliminary report. B. F. SKINNER: The abolishment of a discrimination. DONALD D. VAN SLYKE, ROBERT T. DILLON and ALMA HILLER: Crystallisation of a compound of hæmoglobin and carbon dioxide. BERWIND P. KAUFMANN: Interchange between X- and Y-chromosomes in attached X females of *Drosophila melanogaster*. G. F. SPRAGUE: Pollen tube establishment and the deficiency of waxy seeds in certain maize crosses. It has been shown experimentally that 'waxy' pollen takes longer to germinate and establish a pollen tube than 'non-waxy' pollen. E. M. EAST: The effect of homozygous genes for self-sterility. So-called incompatible matings in *Nicotiana* have been overcome by pollination of immature flowers; self-sterility was due to retardation of pollen-tube growth. It is concluded that self-sterility allelomorphs behave as ordinary non-lethal mutations, though playing a physiological rôle analogous to certain immunological reactions. CHARLES N. MOORE: On criteria for Fourier constants of *L* integrable functions. G. A. MILLER: Groups whose operators have no more than three distinct squares. H. BATEMAN: Logarithmic solutions of Bianchi's equation. LESLIE HELLERMAN, MARIE E. PERKINS and W. MANSFIELD CLARK: Urease activity as influenced by oxidation and reduction. Three types of reaction have been studied: effect of preparations of cuprous oxide and phenylmercuric hydroxide; aeration; effect of iodine. The results suggest that many observations on aspects of urease activity are linked with the oxidation and reduction of the sulphhydryl groups of the enzyme. L. O. BROCKWAY and LINUS PAULING: The electron-diffraction investigation of the structure of molecules of methyl azide and carbon suboxide. The results indicate a linear structure for the azide group of methyl azide, with the methyl group at an angle of 135° to the axis of the azide group; carbon suboxide is represented as a linear structure with bonds intermediate between double and triple bonds, thus: $O=C\equiv C\equiv O$. L. O. BROCKWAY: The electron-diffraction investigation of the molecular structure of cyanogen and diacetylene (with a note on chlorine dioxide). A criticism of Wierl's models; linear models, in which the single bond plays the most important rôle, are preferred. HENRY BORSOOK and GEOFFREY KEIGHLEY: Oxidation-reduction potential of ascorbic acid (vitamin C).

Forthcoming Events

Thursday, December 28

ROYAL INSTITUTION, at 3.—Sir James Jeans: "Through Space and Time" (Christmas Lectures. Succeeding lectures on December 30 and January 2, 4, 6 and 9).

Official Publications Received

GREAT BRITAIN AND IRELAND

The Scientific Proceedings of the Royal Dublin Society. Vol. 20, N.S., No. 41: The Trees of Ireland, Native and Introduced. By H. M. Fitzpatrick. Pp. 597-656. (Dublin: Hodges, Figgis and Co.; London: Williams and Norgate, Ltd.) 3s.

The H.E.A. Year Book: the Annual Publication of the Horticultural Education Association. Vol. 2, 1933. Pp. xxxiv+126. (Wye: South-Eastern Agricultural College.) 3s. 6d.

The Farmer's Guide to Agricultural Research in 1932. Pp. ii+236. (London: Royal Agricultural Society of England.)

The Pharmaceutical Society of Great Britain: Codex Revision Committee. Report of Pharmaceutical Chemistry Sub-Committee: Summary of the Principal Standards for Chemical Substances recommended by the Pharmaceutical Chemistry Sub-Committee and accepted, provisionally, for inclusion in the British Pharmaceutical Codex, 1934. Pp. 51. (London: Pharmaceutical Press.) 2s. 6d.

The Journal of the Chemical Society. November. Pp. iii+1421-1532+viii. (London: Chemical Society.)

The Quarterly Journal of the Geological Society of London. Vol. 89, Part 4, No. 356, November 28th. Pp. 357-526+x+plates 34-50. (London: Longmans, Green and Co., Ltd.) 7s. 6d.

British Medical Association. Report of Committee on Nutrition. Pp. 48. (London: British Medical Association.)

Philosophical Transactions of the Royal Society of London. Series B, Vol. 222, B 489: On some Pteridospermous Plants from the Mesozoic Rocks of South Africa. By Dr. H. Hamshaw Thomas. Pp. 193-265+plates 23-24. (London: Harrison and Sons, Ltd.)

OTHER COUNTRIES

U.S. Department of the Interior: Geological Survey. Water-Supply Paper 639: Geology and Ground-Water Resources of the Roswell Artesian Basin, New Mexico. By Albert G. Fiedler and S. Spencer Nye. Pp. xii+372+46 plates. (Washington, D.C.: Government Printing Office.) 1 dollar.

Bulletin of the National Research Council. No. 90: Physics of the Earth. 6: Seismology. Pp. viii+223. (Washington, D.C.: National Academy of Sciences.) Paper, 2 dollars; cloth, 2.50 dollars.

U.S. Department of Agriculture. Farmers' Bulletin No. 1712: The Harlequin Bug and Its Control. By W. H. White and L. W. Brannon. Pp. ii+10. (Washington, D.C.: Government Printing Office.) 5 cents.

University of California Publications in Zoology. Vol. 4, No. 2: Review of the Recent Mammal Fauna of California. By Joseph Grinnell. Pp. iii+71-234. 1.25 dollars. Vol. 40, No. 3: Mammals of the Pocatello Region of Southeastern Idaho. By Wayne B. Whitlow and E. Raymond Hall. Pp. iv+235-276. 35 cents. Vol. 40, No. 4: The Growth of some Young Raptorial Birds. By E. Lowell Sumner, Jr. Pp. iii+277-308. 50 cents. (Berkeley, Calif.: University of California Press; London: Cambridge University Press.)

Journal of the College of Agriculture, Tokyo Imperial University. Vol. 12, No. 1: On the Distribution of Decapod Crustaceans Inhabiting the Continental Shelf around Japan, chiefly based upon the Materials collected by S.S. *Syôb-Maru* during the Years 1923-1930. By Yu Yokoya. Pp. 226. (Tokyo: Maruzen Co., Ltd.) 3.00 yen.

Royal Observatory, Hong Kong. Magnetic Results, 1884-1931. Prepared under the direction of C. W. Jeffries. Pp. 18. (Hong Kong: Government Printer.)

Ceylon Journal of Science. Section G: Archaeology, Ethnology, etc. Vol. 2, Part 3. Edited by S. Paranavitana. Pp. 149-240+plates 77-92. (Colombo: Colombo Museum; London: Dulau and Co., Ltd.) 3 rupees.

The Indian Forest Records. Vol. 15, Part 8: Multiple Yield Tables for Deodar (*Cedrus deodara* Loudon). By H. G. Champion and I. D. Mahendru. Pp. vii+116+11 plates. 4.8 rupees; 7s. 6d. Vol. 18, Part 11: Investigations on the Infestation of *Peridermium himalayense*, Bagchee, on *Pinus longifolia*. Part 2: *Cronartium himalayense*, n. sp., on *Suaeda* spp.; Distribution, Morphology of the Parasite, Pathological Study of the Infection, Biological Relationship with the Pine Rust, and Control. By Dr. K. Bagchee. Pp. iv+66+18 plates. 4.4 rupees; 7s. Vol. 19, Part 3: Regeneration and Management of *Sal* (*Shorea robusta*) Gaertn. f.: a Survey of the Problems presented and Proposals for necessary further Investigations. By H. G. Champion. Pp. v+159+24 plates. 5 rupees; 8s. 3d. (Delhi: Manager of Publications.)

Report of the Department of Industries, Madras, for the Year ending 31st March 1933. Pp. 84. (Madras: Government Press.) 10 annas.

Western Australia. Annual Progress Report of the Geological Survey for the Year 1932. Pp. 12. (Perth: Government Printer.)

U.S. Department of Agriculture. Circular No. 277: The Oriental Moth (*Cnidocampa flavescens* Walk.) and its Control. By C. W. Collins. Pp. 8. (Washington, D.C.: Government Printing Office.) 5 cents.

Bulletin of the American Museum of Natural History. Vol. 67, Article 3: Glossary and Correlation Charts of North American Tertiary Mammal-Bearing Formations. By George Gaylord Simpson. Pp. 79-121. (New York City.)

Forty-eighth Annual Report of the Bureau of American Ethnology to the Secretary of the Smithsonian Institution, 1930-1931. Pp. v+122. (Washington, D.C.: Government Printing Office.) 2 dollars.