A Spectrophotometric Atlas of the Transition of OH. (NBS Circular 541). Pp. 21. Price 20 cents.

Animal Biochromes and Structural Colours. By Denis L. Fox. (Cambridge University Press), 1953. Pp. xiii + 378. Price 60 sh. net.

Mathematical Aspects of the Quantum Theory of Fields. By K. O. Friedrichs. (Interscience Publishers). Pp. viii + 272. Price $ 5.00.

Geology of India, 3rd Edition. By D. N. Wadia. (McMillan & Co.), 1953. Pp. xx + 531. Price 50 *sh.* net.

Introduction to Dynamics. By L. A. Pars (Cambridge University Press), 1953. Pp. xxii + 501. Price 31 *sh.* 6 *d.* net.

Manual of Indian Forest Botany. By N. L. Bor. (Oxford University Press), 1953. Pp. xv + 441. Price Rs. 25.

Biochemical Transformations of Starch and Cellulose. Edited by R. T. Williams. (Biochemical Society Symposia No. 11, Cambridge University Press), 1953. Pp. 84. Price 10 *sh.* 6 *d.* net.

Organic Analysis, Vol. I. By J. Mitchell, I. M. Kolthoff, E. S. Proskauer, A. Weissberger. (Interscience Publishers Inc.), Pp. viii + 473. Price $ 8.50.

Tables of Dielectric Constants and Electric Dipole Moments of Substances in the Gaseous State. (United States Dept. of Commerce). NBC Circular 537, 1953. Pp. 29. Price 20 cents.

Elements of Forest Economics. By Sven Petrini. Translated by Mark L. Anderson. (Macmillan & Co.), 1953. Pp. viii + 210. Price 22 *sh.* 6 *d.* net.

Selected Values of Physical and Thermodynamic Properties of Hydrocarbons and Related Compounds. (Carnegie Institute of Technology), 1953. Pp. ix + 1,050. Price $ 7.00.

The Birds of Burma. By Bertram E. Smythies. (Revised Edition). (Macmillan & Co.), 1953. Pp xiii + 668. Price £ 4 4 *sh.*

Practical Chromatography. By R. C. Brimley and F. C Barrett (Chapman & Hall), 1953. Pp. 128. Price 15 *sh.*

SCIENCE NOTES AND NEWS

The Delhi Pillar

The freedom from rusting of the famous iron pillar at Delhi has long been a subject of comment and has been attributed by many writers to the peculiar properties of the ancient iron from which it is forged. Although some particulars of its history are obscure, it seems certain that the pillar dates from about the fith cetnury A.D. and is roughly 1,500 years old. The immunity of iron from rusting over such a long period is a striking phenomenon. In this connection the results of some experiments reported by J. C. Hudson in *Nature* (1953, 172, 499) are of great interest.

Small specimens, 4" × 2", of steel (⅛" thick) and zinc (1/20" thick) were exposed in the open air near the pillar for 1 year and their losses in weight were then determined after the corrosion products had been removed. The corrosion-rates were compared with the results of similar tests made at other stations, both in England and overseas.

These make it clear that the corrosive conditions at Delhi are very mild. It is known from the classical researches of W. H. J. Vernon that the relative humidity of the air is the primary controlling factor for the atmospheric corrosion of iron and that little or no rusting occurs unless the humidity exceeds 70 per cent. The meteorological data for Delhi show that this critical value would only be reached for a short time during the whole year. Presumably, too, the sulphur pollution of the atmosphere, which, as Vernon demonstrated, controls the corrosion rate when the humidity reaches the critical value for rusting, is but slight in the neighbourhood of the iron pillar.

Indeed, the zinc specimens were so little corroded that they retained much of their original polish after a year's exposure there In Hudson's view, therefore, the lack of serious rusting of the pillar is to be attributed to the mildness of the local climate rather than to any intrinsic superiority in the corrosion resistance of the iron itself.

Flying Saucers

In an article in *Science* (1953, 118, 124), C. C. Wylie of the State University of Iowa describes his investigations on 'flying saucers' which have been much observed in the United States. Wylie concludes that these are simply reflected sunlight having the following characteristics: (1) they are seen only when the sun is shining; (2) they are generally seen in the part of the sky opposite the sun; (3) there is only one sighting on each saucer, as the area for the critical angle is small,

Synthesis of Pituitary Hormone

The synthesis of oxytocin, a hormone from the important pituitary gland, has been announced by Dr. Vincent Du Vigneaud, Professor of Bio-Chemistry at the New York Hospital, Cornell Medical Centre, in a recent issue of the *Journal of the American Chemical Society*. Oxytocin is the first protein hormone to be synthesised and the first to have its exact chemical make-up determined.

International Union of Crystallography, 1954

The Third General Assembly and International Congress of the International Union of Crystallography will be held in Paris during July 21-28, 1954 At the Congress, papers will be presented on all aspects of crystallographic research; there will also be an exhibition of crystallographic apparatus and books. After the Congress two specialized symposia will be held on "The Location and Function of Hydrogen" and "The Mechanism of Phase Transitions in Crystals", and there will be visits to localities of mineralogical interest. Full details of the meeting may be obtained from the General Secretary of the Union (R. C. Evans, Crystallographic Laboratory, Cavendish Laboratory, Cambridge, England), or from the Secretary of the Programme Committee (A. J Rose, Laboratoire de Mineralogie, 1 rue Victor Cousin, Paris 5, France). Offers of papers for the Congress and symposia and notice of enrolment must reach the Secretary of the Programme Committee (preferably on the form accompanying the first circular) by February 15, 1954. All general correspondence should also be addressed to the Secretary of the Programme Committee

The Palaeobotanist

Volume 2 of the Journal has now been published (price Rs. 20). Volume I (Birbal Sahni Memorial Volume) is also available (price Rs. 50). The prices are inclusive of postage. Copies of the two volumes can be obtained on application from the Registrar, Birbal Sahni Institute of Palæobotany, 53, University Road, Lucknow (India).

Dr. S. Husain Zaheer

Dr S. Hussain Zaheer, Director, Central Laboratories for Scientific and Industrial Research, Professor and Head of the Department of Chemical Technology, Osmania University, Hyderabad-Dn, has been nominated by the Institution of Chemists (India) to deliver the H. K. Sen Memorial Lecture for the current year.

Progress Review in General Zoology

Material relating to *General Zoology* is invited from research workers for inclusion in the yearly review publication of the NIS entitled "Progress of Science in India" for the years 1951-53. They may be forwarded to Dr. B. S. Chauhan, Zoological Survey of India, 34, Chittaranjan Avenue, Calcutta 12, as and when published.

Essay Contest

The Indian Dairy Science Association has organised an essay contest open to all *bona fide* students of dairy, agricultural, veterinary and other educational institutions and research institutes. The subject of the essay is "Application of Refrigeration in Improving the Dairy Trade in India". The essay should be written in English, not exceeding 3,000 words, and three typed copies must be sent to the Association before 15th January 1954. Further particulars can be obtained from the Hon. Secretaries, Indian Dairy Science Association, Hosur Road, Bangalore-1.

Award of Research Degree

The Andhra University has awarded the D.Sc. Degree in Chemistry to Mr. G. Viswanath for his thesis entitled "Absorption Spectra of Certain Bicyclic Compounds and Disubstituted Benzines" and the D.Sc. Degree in Pharmocology to Mr. V. Subba Rao for his thesis entitled "A Study of Some Indian Medicinal Plants".

The University of Bombay has awarded the Ph.D. Degree in Chemistry to Sri. N. H. Sivarama Krishnan for his thesis on "The Spreading Properties of Rubber and Rubber Derivatives".

The University of Poona has awarded the Ph.D. Degree in Biochemistry to Shri Madhav Vinayak Patwardhan for his thesis entitled "Experimental Liver Injuries".

Addendum

Vol 22, No. 10, p. 293: Article on "The Importance of Mid- and Upper Tropospheric Thermal Systems.....during the Nor'wester Season": The following is to be added as a footnote at the end of Column 2:

N.B.—In Figures 1 to 4, the wind arrows with shafts as continuous lines denote thermal winds between 10,000 and 18,000 feet, while the arrows with shafts as broken lines denote thermal winds between 10,000 and 20,000 feet. Winds at 20,000 feet were used when 18,000 feet winds were not available.

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