

can light and sound waves had long been known and the phenomenon had been used, for example, to measure the electrical reflecting surface in the ionosphere. Only with the advent of the ultra-short radio waves in the early 1930's did it become possible to observe reflexions from objects so small as an aeroplane. In 1932, it was noticed that an aeroplane flying about 1,500 ft. overhead produced a noticeable 'flutter' of about four cycles per second. In 1938 the absolute altimeter was introduced commercially for use in aircraft. This instrument employed the principle of directing radio waves against the ground and timing their return to give the exact height of an aircraft above the earth. In the same year, in the United States, a series of experiments at 15th Street in Brooklyn overlooking the Narrows leading into Manhattan's upper bay was made, using a modification of the absolute altimeter enclosed in a hornlike directional antenna system of galvanized sheet, and it was observed that radio waves directed against ships passing through the Narrows were thrown back into the receivers.

With the formation in the United States of the National Defense Research Committee, 'radar' became one of the most active lines of investigation by a large group of scientific workers. A mission of British men of science to the United States made a complete disclosure of the status of their art, with reciprocal disclosures by the N.D.R.C. group. Still in limited use in the U.S. Armed Forces when the United States entered the War, 'radar' is now standard equipment for both American Army and Navy. An official statement says of it, "radar is used by static ground defences to provide data for anti-aircraft guns for use in smashing Axis planes through cloud cover, and by airplanes and warships".

FORTHCOMING EVENTS

(Meeting marked with an asterisk * is open to the public.)

Saturday, October 2

ASSOCIATION OF SCIENTIFIC WORKERS (at Essex Hall, Essex Street, Strand, London, W.C.2), at 2.30 p.m.—Conference on "Problems of Freed Europe—The Challenge to the Medical Sciences". Problems of the Occupied Territories: Belgium (Dr. A. Marteau); Czechoslovakia (Dr. V. Kruta); Greece (Dr. A. P. Cawadias); U.S.S.R. (Prof. S. A. Sarkisov); Present Plans for Relief (Prof. J. R. Marrack).

GEOLOGISTS' ASSOCIATION (at Geological Society, Burlington House, London, W.1), at 2.30 p.m.—G. S. Sweeting: "Wealden Iron Ore and the History of its Industry".

Monday, October 4

SOCIETY OF CHEMICAL INDUSTRY (LONDON SECTION) (at the Chemical Society, Burlington House, Piccadilly, London, W.1), at 2.30 p.m.—Mr. S. J. Johnstone: "The Organisation and Use of Technical Intelligence Services".

Tuesday, October 5

ROYAL ANTHROPOLOGICAL INSTITUTE (at 21 Bedford Square, London, W.C.1), at 1.30 p.m.—Dr. Margaret Mead: "Modern Anthropology".

CHADWICK PUBLIC LECTURE (at the Royal Society of Tropical Medicine and Hygiene, 26 Portland Place, London, W.1), at 2.30 p.m.—Mr. E. J. Boome: "Muscular and Mental Relaxation in Peace and War".*

SOCIETY FOR THE STUDY OF INEBRIETY (in the Meyerstein Lecture Hall, Westminster Hospital Medical School, Horseferry Road, London, S.W.1), at 4 p.m.—Dr. A. Ninian Bruce: "Alcohol and Avitaminosis" (Nineteenth Norman Kerr Memorial Lecture).

SOCIETY OF CHEMICAL INDUSTRY (MANCHESTER SECTION) (Joint Meeting with the MANCHESTER LITERARY AND PHILOSOPHICAL SOCIETY) (in Room 7, The University, Oxford Road, Manchester), at 5.30 p.m.—Sir John Russell, F.R.S.: "Agricultural Reconstruction in Europe after the War".

Thursday, October 7

Institution of Electrical Engineers (at Savoy Place, Victoria Embankment, London, W.C.2), at 5.30 p.m.—Colonel Sir A. Stanley Angwin: Presidential Address.

Friday, October 8

ROYAL ASTRONOMICAL SOCIETY (at Burlington House, Piccadilly, London, W.1), at 4.30 p.m.—Mr. H. W. Newton: "Solar Flares and Magnetic Storms".

Saturday, October 9

SHEFFIELD METALLURGICAL ASSOCIATION (Joint Meeting with the MICROCHEMICAL SECTION OF THE SOCIETY OF PUBLIC ANALYSTS and the SOUTH YORKSHIRE SECTION OF THE ROYAL INSTITUTE OF CHEMISTRY) (in the Department of Applied Science, The University, St. George's Square, Sheffield), at 2.30 p.m.—Symposium on "Microchemical Analysis".

APPOINTMENTS VACANT

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

CHAIR OF SOCIAL MEDICINE—The Secretary, The University, Edmund Street, Birmingham 3 (March 1).

UNIVERSITY LECTURER IN ANTHROPOLOGY—The Secretary of the Appointments Committee of the Faculty of Archaeology and Anthropology, Museum of Archaeology and of Ethnology, Cambridge (April 15).

HEAD OF THE DEPARTMENT OF DYEING in the Bradford Technical College—The Director of Education, Town Hall, Bradford (October 9).

LECTURER IN PHYSIOLOGY AND ZOOLOGY—The Registrar, Technical College, Sunderland (October 9).

LECTURER (WOMAN) IN BIOLOGY in the Department of Pharmacy and Biology—The Principal, Central Technical College, Suffolk Street, Birmingham 1 (October 9).

EDUCATIONAL PSYCHOLOGIST—The Chief Education Officer, Education Office, Warrior Square, Southend-on-Sea (October 11).

RESEARCH HISTOLOGIST (NON-MEDICAL) in the Pathological Department—The Secretary, Royal Cancer (Free) Hospital, Fulham Road, London, S.W.3 (October 13).

TEACHER OF MATHEMATICS AND PHYSICS in the Junior Technical School and Senior part-time Classes of the Batley Technical College—The Director of Education, Education Offices, Batley, Yorkshire (October 15).

ASSISTANT ELECTRICAL ENGINEER for the Nigerian Government Public Works Department—The Secretary, Overseas Manpower Committee (Reference No. 538), Ministry of Labour and National Service, Alexandra House, Kingsway, London, W.C.2.

ASSISTANT MECHANICAL ENGINEER for the ELECTRICAL BRANCH of the Nigerian Government Public Works Department—The Secretary, Overseas Manpower Committee (Reference No. 1076), Ministry of Labour and National Service, Alexandra House, Kingsway, London, W.C.2.

MECHANICAL AND ELECTRICAL ENGINEER for the Gold Coast Government Public Works Department—The Ministry of Labour and National Service, Central (Technical and Scientific) Register, "D" Section, D.588X, Alexandra House, Kingsway, London, W.C.2.

ENGINEER AND MANAGER of the Inverness Corporation Electricity Department—The Town Clerk, Town House, Inverness (October 11).

ASSISTANT MASTER TO TEACH SCIENCE, with an Engineering bias, and PRACTICAL MATHEMATICS, in the Forest of Dean Mining and Technical School and East Dean Grammar School—The Secretary, County Education Office, Shire Hall, Gloucester.

REPORTS and other PUBLICATIONS

(not included in the monthly Books Supplement)

Great Britain and Ireland

Proceedings of the Royal Society of Edinburgh. Section B (Biology). Vol. 61, Part 4, No. 30: Study of an Introduced North American Freshwater Mollusc, *Stagnicola catascopium* (Say). By D. Keith McE. Kevan. Pp. 430-401. (Edinburgh and London: Oliver and Boyd.) 2s. 9d. [308]

Scientific Proceedings of the Royal Dublin Society. Vol. 23 (N.S.), No. 15: The Chemical Constituents of Lichens found in Ireland—*Lecanora gangetoides*, Part 3: The Constitution of Gangaleoidin. By Dr. V. E. Davidson, Dr. J. Keane and Dr. T. J. Nolan. Pp. 143-164. (Dublin: Hodges, Figgis and Co., Ltd.; London: Williams and Norgate, Ltd.) 2s. [308]

Report of the Astronomer Royal to the Board of Visitors of the Royal Observatory, Greenwich, read at the Annual Visitation of the Royal Observatory, 1943 June 5. Pp. 14. (Greenwich: Royal Observatory.) [308]

Other Countries

Commonwealth of Australia: Council for Scientific and Industrial Research. Bulletin No. 158: The Recovery of Inter-Block Information in Quasi-Factorial Designs with Incomplete Data, 1: Square, Triple and Cubic Lattices. By E. A. Cornish. Pp. 22. Bulletin No. 159: Poisonous and Harmful Fishes. By G. P. Whitley. (Division of Fisheries, Report No. 10.) Pp. 28+3 plates. Bulletin No. 161: A Review of the Evidence concerning Expansive Reaction between Aggregate and Cement in Concrete. By Dr. A. R. Alderman. Pp. 19. (Melbourne: Government Printer.) [178]

Queen Victoria Memorial, Salisbury, Southern Rhodesia. Annual Report for the Year ended 31st March 1943. Pp. 10. (Salisbury: Queen Victoria Memorial.) [178]

Association of Scientific Workers of Southern Africa. Research Memorandum No. 1: Marine Biological Research and the South African Fishing Industry. By Wm. Edwyn Isaac. Pp. 16. (Cape Town: The African Bookman.) 1s. 6d. [178]