

## SCIENCE NEWS A CENTURY AGO

## The Geological Society

At a meeting of the Geological Society, on November 6, 1839, several papers were read, among them being one "On the Relative Ages of the Tertiary and Post-Tertiary Deposits of the Basin of the Clyde" by James Smith; and another paper was "On the Noxious Gases Emitted from the Chalk and Overlying Strata in Sinking Wells near London", by Dr. Mitchell.

The most abundant deleterious gas in the chalk, said Dr. Mitchell, is the carbonic acid, and it is said to occur in greater quantities in the lower than the upper division of the formation. The distribution of it, however, in that portion of the series is very unequal, it having been found to issue in considerable quantities from one stratum, while from those immediately above and beneath none was emitted. Sulphuretted hydrogen and carburetted hydrogen gases sometimes occur where the chalk is covered with sand, and London clay, as well as in other situations. In making the Thames Tunnel they have been both occasionally given out, and some inconvenience has been experienced by the workmen: but in no instance have the effects been fatal. In the districts where sulphuretted hydrogen gas occurs, the discharge increases considerably after long-continued rain, the water forcing it out from the cavities in which it had accumulated. Dr. Mitchell cited several cases of well-diggers having been suffocated from not using proper precautions.

## Difference of Longitude between Greenwich and New York

At the Birmingham meeting of the British Association in August, 1839, Edward John Dent (1790-1853), the well-known chronometer maker, gave an account of observations made with four chronometers sent to the United States and back in the S.S. *British Queen* on her first trans-Atlantic passages.

Referring to the use of chronometers, Dent said that "The rapid transmission of chronometers now practicable by means of steam vessels from one meridian to another offers great facilities for the determination of the differences of longitude". On November 8, 1839, he wrote from No. 84, Strand, to the Editor of the *Athenæum* giving particulars of observations made during the second voyage of the ship with a second set of chronometers. By the second experiment the difference of longitude between the observatory at Greenwich and the City Hall, New York, was found to be 4h. 56m. 0.24s. west. "The great rapidity and accuracy," said Dent, "with which this important branch of nautical inquiry may be pursued over the whole surface of the globe, as the agency of steam shall be extended, is now, I think, demonstrated. . . . Within the space of ninety-nine days, we have seen the *British Queen* carry chronometers four times across the Atlantic, and give ample time during each of her visits to New York for the necessary observations of rates, etc.

"All objections founded on the idea that the motion of a steam vessel would affect injuriously the more delicate movement of the chronometer and taint the results must now fall to the ground. In the two voyages out and home of the *British Queen*, no derangement occurred, and the determination of the longitude of the far-distant ports she sailed between is, probably, settled for ever, within a fraction of a second of the truth."

## APPOINTMENTS VACANT

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

**MUNICIPAL ENGINEER** to the Municipality of George Town, Penang.—Peirce and Williams, 1 Victoria Street, S.W.1 (November 7).

**INTERNATIONAL SENIOR FELLOWSHIP IN SCIENCE**—The Hon. Secretary, British Federation of University Women, Ltd., 16 King Street, Reading, Berks (November 10).

**BOROUGH ELECTRICAL ENGINEER AND MANAGER** to the County Borough of Halifax—The Town Clerk, Town Hall, Halifax (November 14).

**RESEARCH PROFESSOR OF MEDICAL PSYCHOLOGY** in the University of Queensland—The Agent-General for Queensland, 409 Strand, W.C.2, or the Universities Bureau of the British Empire, 88a Gower Street, W.C.1.

**SENIOR TECHNICAL OFFICERS** (Ref. 375/Y) and **TECHNICAL OFFICERS** (Ref. 375/Z) by the Air Ministry—The Under-Secretary of State, S.2.A., Department Z.A., Air Ministry, Adastral House, Kingsway, W.C.2.

**PART-TIME LECTURER IN PHYSICS**—Head of the Department of Mathematics and Physics, The Polytechnic, Regent Street, W.1.

**TEMPORARY METEOROLOGICAL ASSISTANTS (Male)** in the Meteorological Office—The Under-Secretary of State, S.2.B (Met.), Department Q.J., Air Ministry, Adastral House, Kingsway, W.C.2.

## REPORTS AND OTHER PUBLICATIONS

(not included in the monthly Books Supplement)

## Great Britain and Ireland

*Amgueddfa Genedlaethol Cymru: National Museum of Wales. Guide to the Collection of British Aculeate Hymenoptera.* By Howard M. Hallett. Pp. 28. (Cardiff: National Museum of Wales.) 4d. [1110]

*London Shellac Research Bureau. Technical Paper No. 18: Fibrous Lac.* By Dr. R. Bhattacharya and G. D. Heath. Pp. 14. (London: London Shellac Research Bureau.) [1210]

*Imperial Agricultural Bureaux. Herbage Publication Series, Bulletin 26: Research on Grassland, Forage Crops and the Conservation of Vegetation in the United States of America.* Compiled by R. O. Whyte. Pp. 113. (Aberystwyth: Imperial Bureau of Pastures and Forage Crops.) 5s. [1310]

*Report of the Council of the Natural History Society of Northumberland, Durham and Newcastle-upon-Tyne, for the Year 1938-39.* Pp. 44. (Newcastle-upon-Tyne: Hancock Museum.) [1610]

## Other Countries

*Journal of the Indian Institute of Science. Vol. 22A, Part 12: The Stereo-Chemistry of Pinane and its Derivatives.* By K. Ganapathi. Pp. 155-169. (Bangalore: Indian Institute of Science.) 1.2 rupees. [1110]

*Catalogue of Indian Insects. Part 24: Evaniidae.* By M. S. Mani. Pp. ii+14+ii. (Delhi: Manager of Publications.) 7 annas; 8d. [1110]

*Imperial College of Tropical Agriculture. Eighth Annual Report on Cacao Research, 1938.* Pp. 42+2 plates. (Port-of-Spain: Government Printing Office.) 5s. [1210]

*U.S. Department of Agriculture. Circular No. 523: Toxicity of Certain Organic Insecticides to Coddling Moth Larvae in Laboratory Tests.* By E. H. Siegler, F. Munger and L. E. Smith. Pp. 10. (Washington, D.C.: Government Printing Office.) 5 cents. [1210]

*U.S. Department of the Interior: Office of Education. Bulletin, 1938, No. 17: Hospital Schools in the United States.* By Clele Lee Matheson. Pp. vii+79. (Washington, D.C.: Government Printing Office.) 15 cents. [1210]

*Smithsonian Institution: Bureau of American Ethnology. Bulletin 125: Ethnography of the Fox Indians.* By William Jones. Edited by Margaret Wepley Fisher. Pp. ix+156. (Washington, D.C.: Government Printing Office.) 25 cents. [1210]

*Proceedings of the United States National Museum. Vol. 87, No. 3071: A New Trematode from the Loon, *Gacria immer*, and its Relationship to *Haematotrepheus fodiens* Linton, 1923.* By W. Carl Gower. Pp. 139-144. (Washington, D.C.: Government Printing Office.) [1310]

*Smithsonian Miscellaneous Collections. Vol. 93, No. 23: Stimulative Effect of Short Wave Lengths of the Ultraviolet on the Alga *Stichococcus bacillaris*.* By Florence E. Meier. (Publication 3549.) Pp. ii+20+4 plates. (Washington, D.C.: Smithsonian Institution.) [1310]

*Trinidad and Tobago: Forest Department. Administration Report of the Conservator of Forests for the Year 1938.* Pp. 16. (Trinidad: Government Printer.) 18 cents. [1310]

*Palaeontologia Sinica. New Series C, No. 5 (Whole Series No. 114): The Fossils from Locality 12 of Choukoutien.* By P. Teilhard de Chardin. Pp. ii+47+1 plate. (Nanking and Peking: Geological Survey Library.) [1610]

*Commonwealth of Australia: Council for Scientific and Industrial Research. Bulletin No. 127: Radio Research Board Report No. 14. Pp. 30. Bulletin No. 128: An Investigation of the Problems of Salt Accumulation on a Mallee Soil in the Murray Valley Irrigation Area.* By J. E. Thomas. Pp. 83+2 plates. Pamphlet No. 88: *The Oriental Peach Moth (*Cydia molesta* Busck) Investigations in the Goulburn Valley, Victoria; Progress Report for the Seasons 1935-38.* By G. A. H. Helson. Pp. 23. (Melbourne: Government Printer.) [1610]