

distance from the point of suspension. When the illumination on the pendulum was only two foot candles, the letter *E* could only be seen about a quarter of the way down the pendulum. But when the illumination was increased to 100 foot candles the letter *E* could be seen almost at the bottom of the pendulum. A connexion can thus be obtained between the speed of vision and illumination. Experiments were described on the effect produced by the vibration of public vehicles. When the vehicle was moving, an appreciable reduction both in the speed of reading and in visual acuity took place. Experiments made a few years ago by reading a newspaper in a train on the Bakerloo Railway when it was at rest and when it was running showed that in the former case the speed of reading was 220 words a minute and in the latter 140 words a minute. In this case the illumination was two foot candles. Tests carried out in trains and buses under similar conditions about the same time gave similar results, showing that there was an appreciable reduction in the speed of reading when the vehicle is in motion. Reading under vibratory conditions in a poor light is known to cause visual fatigue and is apt to produce headaches. We are glad to hear that in some of the London Underground railway coaches to-day, the illumination at reading level has been raised to about twenty foot candles. This automatically does much to mitigate the effects of vibration, so far as visual performance and comfort are concerned.

English Folk Dance and Song Society

THE recent amalgamation of the Folk Song Society with the English Folk Dance Society has been marked by the appearance of a new journal with the title *Journal of the English Folk Dance and Song Society*, under the editorship of Mr. Frank Howes. The contents of the first number are indicative of the policy which it is now considered desirable for the reorganised societies to pursue in common. The primary object which the original societies had in view was the collection and preservation of the remains of traditional songs and dances. This work now being regarded as completed, so far as can be seen, the main work of the joint society on its scientific side will be intensive comparative study of the material which has been collected. In the first issue both activities, it is true, are represented. Ten more of the forty Gaelic songs collected by Miss Lucy Broadwood twenty-five years ago are published, as well as some English folk songs and dances recently recorded. On the comparative side, Mr. A. G. Gilchrist makes an exhaustive study of the Scottish and Northumbrian ballad *Lambkin*, discussing its growth and origin in the light of some forty versions. Similar studies of no little interest to students of culture and of 'survivals' and their distribution are Miss Violet Alford's record of the form and distribution of the *Farandole* in the south of France and in Spain and the study of the sword-dance by Dr. R. Wolfram of Vienna, who connects it with the initiation ceremony, seeing in the decapitation of the 'fool' the ritual death of initiation rather than the memory of a fertility sacrifice.

Sadi Carnot, 1796-1832

IN *La Nature* of February 1, under the title "Grandeur et Modestie d'un savant Français: Sadi Carnot", M. Roger Vène gives a sketch of the life and character of the young French engineer who wrote the famous essay "Réflexions sur la puissance motrice du feu". Carnot was only twenty-eight years of age when he published the essay, and he died of cholera eight years later. According to the regulations, the clothes and papers belonging to the victims of the cholera epidemic which swept through Paris in 1832 were to be destroyed, but fortunately some of Carnot's manuscripts were saved by his friend Clapeyron. Born in the Petit Luxembourg when his father, Lazare Carnot, was a member of the Directory, Sadi had a brilliant career as a student of the Ecole Polytechnique but was too young to take part in the Napoleonic Wars, and his life was spent mainly in the routine of the barracks. The extracts given by M. Vène reveal a charming personality. The article is accompanied by a portrait of Carnot at the age of seventeen years. An article on Carnot appeared in our columns on August 20, 1932 (p. 266).

Plant Pathology at Rothamsted Experimental Station

THE Committee of Management of the Rothamsted Experimental Station recently decided to reorganise the old Department of Mycology, started in 1918 under the charge of Dr. W. B. Brierley, now professor of agricultural botany at the University of Reading, and to constitute it a Department of Plant Pathology with Dr. J. Henderson Smith as head. Dr. Henderson Smith studied medicine at Balliol College, Oxford, and then proceeded to the University of Edinburgh, where he took his medical degree; he was then awarded the Philip Walker studentship in pathology, which he held at Oxford until his appointment first as bacteriologist at the Lister Institute and afterwards as plant pathologist in the Mycology Department at Rothamsted. He has published numerous papers on animal pathology, especially immunity and bacteriology, and on plant pathology, especially virus diseases.

Motor-Car Speed Record

ON February 22, Sir Malcolm Campbell broke his own motor-car speed record on Daytona Beach, Florida, in his car the *Blue Bird*. On the southward run Sir Malcolm covered the mile in 13.16 sec. and in the northern run in 13.60 sec. His mean speed worked out at 272.108 miles per hour, thus being well ahead of his record of 253.978 miles per hour set up last year. The *Blue Bird* is fitted with a Rolls-Royce engine developing 2,350 h.p. at 3,200 r.m.p. The engine has a bore of 6 in. and a stroke of 6.6 in. This type of engine was also installed in the aeroplane which won the Schneider Trophy for Great Britain and in the machine in which Flight-Lieut. Stainforth achieved the world's present air speed record of 407.5 miles per hour.

British Fresh-Water Fishes

THE Trustees of the British Museum have published a second edition of their "Guide to the British

Fresh-Water Fishes" exhibited in the Department of Zoology of the British Museum (Natural History). This edition has been revised by the original author, Dr. C. Tate Regan; it is practically a reprint of the 1917 edition with one or two very minor alterations, but the paragraph on the common eel has been rewritten to include the new knowledge gained in recent years on the life-history of this fish through the researches of the late Dr. Johannes Schmidt. This publication, which is still priced at sixpence, is an invaluable little handbook for the identification of the fresh-water fishes of Great Britain.

Amphibia and Reptiles of North China

A CONCISE and excellent "Handbook of North China Amphibia and Reptiles" by Dr. Alice M. Boring, C. C. Liu, and S. C. Chou, has been published as a Peking Natural History Bulletin (August 1932). It contains keys for the identification of the various families, and of eggs and tadpoles of the species of frogs and toads. The descriptions of the characteristic structures and habits of species, and the excellent drawings, should greatly help the natural history survey of the country, which is one of the objects of the Peking Natural History Society.

Mr. T. Sheppard and the *Naturalist*

WITH the close of 1932, Mr. T. Sheppard retired from the editorship of the *Naturalist*, having served it as editor for thirty years. As an illustrated monthly journal, designed for readers within the domain of the Yorkshire Naturalists' Union, the *Naturalist* has maintained a high standard, and in its comments and reviews it conveyed a touch of the editor's vitality and boisterousness. The occasion of his retirement was made an opportunity of presenting Mr. Sheppard with his portrait in oils by Mr. Vincent Galloway.

Kansu Earthquake of December 26

EARLIER than was expected, reports have arrived from north-west China about the earthquake of December 26 (local time). From these, it appears that 280 persons were killed and 300 seriously injured, while 800 houses were destroyed. These losses occurred in the north-west of Kansu, one of the Chinese provinces most frequently visited by disastrous earthquakes.

Announcements

DR. F. A. BATHER has been awarded the Mary Clark Thompson medal of the National Academy of Sciences, Washington, "for his distinguished services in the fields of palæontology and geology".

THE tenth annual conference of the Association of Special Libraries and Information Bureaux will be held at the Wills Hall, Bristol, on September 22-24, under the presidency of Sir Charles Sherrington. Further particulars can be obtained from the Secretary of the Association, 16, Russell Square, London, W.C.1.

AT the annual general meeting of the Association of Economic Biologists held in the Imperial College of Science, London, on February 24, the following

officers for the ensuing year were elected:—*President*, Prof. W. B. Brierley; *Vice-Presidents*, Prof. J. W. Munro, Prof. W. Brown; *Hon. Treasurer*, Dr. J. Henderson Smith; *Hon. Editors*, Prof. W. B. Brierley, Prof. J. W. Munro; *Hon. Secretaries*, Prof. R. H. Stoughton, Mr. G. Fox-Wilson.

AT the ninety-first meeting of the American Association for the Advancement of Science, which was held on December 27-31, at Atlantic City, Prof. Henry Norris Russell, research professor in astronomy and director of the Observatory at Princeton University, was elected president for the ensuing year, and Prof. Henry B. Ward, who retires from the professorship of zoology in the University of Illinois in June next, was elected permanent secretary. The American Association prize of 1,000 dollars has been awarded to Dr. Henry Eyring, of Princeton University, for a paper entitled "Quantum Mechanics and Chemistry, with particular Reference to Reactions involving Conjugate Double Bonds".

THE Oxford University Press will publish in April the first number of a new *Empire Journal of Experimental Agriculture*. This journal will offer agricultural research workers in the British Empire a medium for disseminating the records and results of their investigations on the feeding and management of livestock, cultivation and manuring of crops, trials of farm machinery, agricultural economics and experimental technique. The *Journal* will command a strong editorial Board, including, among others, Sir John Russell, Sir Rowland Biffen, Sir Daniel Hall, Sir Robert Greig, Sir Frederick Keeble and leading agricultural authorities in the chief countries of the Empire. Dr. E. H. Tripp, 40 Trewsbury Road, Sydenham, London, S.E.26, is secretary and general editor. The *Journal* will be published quarterly: subscription price 20s. for four numbers or single numbers 7s. 6d. net, each.

APPLICATIONS are invited for the following appointments, on, or before, the dates mentioned:—A mathematics master at the Junior Technical School of the Wimbledon Technical College—The Principal (March 10). An assistant lecturer in zoology at the University of Manchester—The Registrar (March 11). A teacher in electrical engineering subjects at the Southall Technical College—H. M. Walton, Education Offices (H), 10, Great George Street, London, S.W.1 (March 21). A woman tutor in hygiene and biology at the Edge Hill Training College, Ormskirk, Liverpool—The Principal (March 24). A director of the Royal Technical College, Glasgow, and a professor of technical chemistry at the College—The Secretary (April 17). Physicists and electrical engineers for the staff of the Radio Research Board of the Commonwealth of Australia Council for Scientific Research—F. L. McDougall, Australia House, Strand, W.C.2.

ERRATUM.—NATURE, February 25, p. 268, col. 2, paragraph entitled "Fat in Aestivating Animals". line 13 for *Pachyurus* read *Pachyruromys*.