extent of the inversion is defined. Such inversions tend to prevent upward convection and the formation of rain is hindered. Complete observations of halo would be of material assistance. At de Bilt in 1922, rain followed halo in 70 per cent. of cases of halo observations, and only 70 out of 200 rain-days were not preceded by halo observations somewhere in Holland.

The anniversary dinner was held on the evening of April 22. After the toast of the King, patron of the Society, had been enthusiastically honoured, Mr. H. Mellish proposed the toast of The Services, and Capt. H. P. Douglas, Hydrographer of the Navy, responded. He spoke of the work which is now being done in the Navy in the investigation of the upper air by pilot balloons and registering balloons. Sir Philip Sassoon, M.P., Under-Secretary of State for Air, proposed the toast of the Royal Meteorological Society. He referred to some of the events in the history of the Society, and paid a tribute to the aid which meteorologists had been able to send to the Airship R33, in the shape of weather reports and directions for the best course to be taken, on the occasion of its recent break-away in a gale from its mooring-mast at Pulham. The president responded to this toast. Sir Napier Shaw proposed the toast of International Meteorology, and Prof. E. van Everdingen responded.

R. C.

The British Science Guild.

THE annual meeting of the British Science Guild was held in the Salters' Hall on Tuesday, April 21, the chair being taken by the Right Hon. Lord Askwith, president of the Guild.

Reviewing the work of the Guild, the chairman directed attention particularly to its co-ordinative functions, linking together the operations of many different bodies, and to its efforts to bridge the gulf between men of science and the general public. Reference was made to the issue of the revised edition of the Catalogue of British Scientific and Technical Books, which now contains more than 9500 titles of books, and should prove most valuable to students, libraries, and manufacturers. Methods of obtaining "Science Publicity" are being considered, but this demands the co-operation of leading scientific and technical societies. A new feature has been the formation of six standing committees (National Security, Parliamentary, Health, Research and Industry, Finance, and General Purposes).

An address emphasising the need of increasing knowledge of science among the public, and the application of scientific method to public affairs, was delivered by Sir William Bragg, who pointed out the contrast between the marvellously rapid development of scientific data, and the meagre facilities for letting the public know what was being done on their behalf. The forty millions of people in the British Isles are living on the direct application of science, and they should know what science has done, and what it might do in the future. It is unfortunate that scientific men, who spend their days in wresting information from Nature in the laboratory, have not as a rule the supplementary gift of conveying scientific information in a popular form. Publicity for science is needed. If, as it is hoped, a proper organisation for publicity in scientific matters could be created, there should be at its head a scientific literary man, and behind it funds sufficient to tide over the first period of its existence.

Sir Arthur Newsholme, speaking as chairman of the Health Committee, said that the average life of a child born to-day is some 10 to 12 years longer than it was 30 to 40 years ago. This is due to a better knowledge of the laws of health. What should be investigated are the causes of evils rather than their alleviation—as illustrated by the millions of headache powders and similar nostrums sold. Attention has been directed by the Health Committee to two defects in the Births and Deaths Registration Bill now before Parliament. There is no valid verification of the fact of death, and the certificate of death should be regarded as confidential and lodged with the registrar and not handed to the nearest relative.

Major the Hon. H. Fletcher Moulton (chairman of the Research and Invention Committee) pointed out that in regard to industry there is a gap similar to that remarked on by Sir William Bragg in connexion with publicity. Manufacturers of Great Britain are sometimes blamed for not availing themselves more freely of the results of scientific researches. There is, however, a gulf between the man working in the laboratory and the business man. An intermediary, who could demonstrate to the latter how he would benefit from the application of science, is needed. It is in this intermediate stage that Germany has made such rapid progress.

Excavations at Cresswell Crags, Derbyshire.

AT a meeting of the Royal Anthropological Institute held on April 21, Mr. A. Leslie Armstrong read a paper entitled "Recent Excavations on Palæolithic Sites at Cresswell Crags, Derbyshire," describing excavations which had been carried out by him under a Joint Committee of the British Association and the Royal Anthropological Institute. The two important sites of Upper Palæolithic date under investigation consist of a rock shelter and a cave respectively. The former, excavated between June and October 1924, is situated in front of Mother Grundy's Parlour, the last cave of the Cresswell group excavated by Sir William Boyd Dawkins and the late Rev. J. M. Mills in 1879. This proved to be an undisturbed stratified deposit with a Palæolithic relic bed 2 feet 6 inches thick. The lowest stratum yielded implements of quartzite which, from evidence afterwards obtained in the cave site, are probably referable to Mousterian times. Overlying this was a rich deposit from which flint implements, bone tools, and three pieces of engraved bone were recovered. The latter are believed to represent bison, reindeer, and rhinoceros, but all are fragmentary. At the lowest level of this layer was a hearth formed in a hollow scooped out in the basement bed and ringed around with flat stones, on edge, just as Boy Scouts build a fireplace to-day. The area around the fire proved the most prolific in antiquities. The flint implements from that level are late Aurignacian in general character, those from the top of the deposit are early Tardenoisian, and those from the intervening layer reveal a gradual development in style and technique from one culture to the other.

The second site dealt with was the cave known locally as the Pin Hole. Excavations in September last revealed that the examination made by Mills fifty years ago had extended to the first seven yards only, and that the remainder of the cave was practically undisturbed. Through the generosity of the Percy Sladen Memorial Fund Trustees and the kindness of

His Grace the Duke of Portland, it has been made possible to undertake a thorough examination of the cave, and work is now in progress there. The results already achieved include the discovery of a lance point in mammoth ivory, engraved with a conventional pattern, which is assigned by the Abbé Breuil to the Middle Magdalenian period, and is identical with one found in the cave of La Madeleine itself. This implement and others associated are considered to provide the most definite evidence so far discovered at Cresswell for the precise dating of the culture and its correlation in point of time, if not in development, with the classic cave sites of France. Considerable data have also been obtained in proof of occupation in Upper Mousterian times and at a still earlier period.

At the conclusion of the paper a letter was read from Sir William Boyd Dawkins, chairman of the Committee, in which he entered a *caveat* against acceptance of the engravings on bone from Mother Grundy's Parlour as of human origin. In his opinion, they were due to the action of roots. In the discussion, Prof. W. J. Sollas said that he had no doubt that they were of human origin, while Miss Garrod stated that she was authorised to say that the Abbé Breuil, who had examined the fragments that day, was convinced that the reindeer, and some at least of the lines forming the figure which was thought to be a rhinoceros, had undoubtedly been engraved by man. The bison, however, was more doubtful and might possibly be due to root action.

The Natural History of Disease in Baltimore, Maryland.[1]

THE publication before us forms one of the admirable reports issued by the Carnegie Institution of Washington, and therefore calls for attention. It purports to trace the development of public health in one of the oldest cities in the States, and to correlate, so far as practicable, the ascertainable factors bearing on the natural history of disease in that city during a span of more than a century. The attempt is made in nearly 600 pages, beset with elaborate statistical tables and a number of graphs, which have been reduced to an extent which makes them partially illegible.

The valuable portion of the work deals with the actual topography of Baltimore and with the details of the gradual development of its public health administration. In 1820 an ordinance was passed making it the duty of all practising physicians to report cases of malignant or contagious fevers to the mayor or Board of Health; and although this and subsequent but very early further ordinances of similar nature were not enforced, they are interesting as preceding by many years similar ordinances (which were enforced) in Great Britain. Similarly, health commissioners, corresponding to our medical officers of health, were appointed, antedating the appointment of the similar earliest appointed officers in London and in Liverpool. But although these appointments were made, the rapid growth of Baltimore, its increasing heterogeneity of population, and other factors, have left it far behind in subsequent sanitary practice. The reader will find, in comparing the Baltimore enactments with those in Great Britain, much of interest and of practical value; and the balance to the good does not always rest with English legislation. Perhaps, however, we may agree with Solon in his advice to the Athenians; let us have the best law we can keep, not the best laws that can be made.

For epidemiologists and students of natural history generally, however, one looks chiefly to the history of disease prevalence as here presented. A vast amount of material has been compiled, Teutonic in bulk, and Teutonic likewise in the failure to sift out what is trustworthy and to save the student unnecessary and wearisome detail. Thus deaths and death-rates are given for all causes in the aggregate and for some single diseases from 1812 onwards; although prior to 1875, when death-certificates were first required by law, the only information available was that obtained from the sextons of the cemeteries. What proportion of deaths were buried "extra-murally" we can only guess; but the large extent to which deaths of inhabitants in institutions outside the city —which are not recorded in the city statistics— vitiate the statistics given throughout the report, may be gathered from data emerging here and there in the volumes.

When we pass to causes of death, difficulties in accepting the data laboriously collected begin to multiply. Thus on p. 193 is given a list of the causes of deaths named among the burials in the year 1819. "Consumption" is the only item of likely tuberculous nature which appears. On p. 383 the death-rate from pulmonary tuberculosis for the same year appears as 492 and from other forms of tuberculosis as nil. In 1920 the corresponding rates were 128 and 23! On such data, of which an extreme example has been given, are based discussions as to the upward and downward course of the tuberculosis death-rate, which possess very slight value. The problem in Baltimore, as in many other American cities, has been complicated by large immigration of Irish, of Greeks, of Russians and Poles, and by a large negro population. The statistics deal with these heterogeneous groups as if they formed a homogeneous whole; and on such data, extremely imperfect in other respects, we are asked to accept sweeping conclusions, as for example that the course of the death-rate from tuberculosis in Baltimore has been determined above all other factors by natural selection. On similarly imperfect data, to give one further illustration, is based the unlikely inference that although an increasing ratio of the population now attain middle life, these individuals on the whole prove to be poorer risks and less capable of survival to old age than were the proportionally smaller numbers who reached the age of 40 "when natural selection was more searching in its action." To base such a sweeping conclusion on the imperfect statistics of a heterogeneous population, affected by immigration, composed of blacks and whites, of persons of eastern and southern European as well as of British and Irish origin, is extremely indiscreet; and study of the English Registrar-General's figures would have shown its error for a country in which more stable conditions exist, and for which official mortality statistics can be regarded as trustworthy.

[1] Public Health Administration and the Natural History of Disease in Baltimore, Maryland, 1797–1920, by Dr. W. T. Howard, jun.

University and Educational Intelligence.

CAMBRIDGE.—Mr. H. Gilbert-Carter, Trinity College, has been reappointed as curator of the Herbarium. Sir John Russell and members of the staff of the Rothamsted Experimental Station are giving this term a special course of lectures on "The Chemistry, Physics and Biology of the Soil." The Linacre Lecture will be delivered on May 6 by Lt.-Gen. Sir William B. Leishman, Director-General, Army Medical