Royal Meteorological Society.

THE Royal Meteorological Society was founded under the name of "The British Meteorological Society" on April 3, 1850, and the occasion of its seventy-fifth anniversary was celebrated in London on April 21 and 22. The following brief account of the history of the Society and of its predecessors may therefore be of interest.

The first English Meteorological Society was inaugurated so long ago as 1823. Luke Howard, Thomas Forster, and Dr. Birkbeck were among its founders, while Prof. Daniell was one of its members. The Society became dormant shortly afterwards, when Luke Howard moved away from London, and in 1836 a new Society was formed, which was generally known as the Meteorological Society of London. One of its members was John Ruskin, who in 1839 contributed to the Society's Transactions a paper from which the following extract is taken:

"A Galileo, or a Newton, by the unassisted workings of his solitary mind, may discover the secrets of the heavens, and form a new system of astronomy. . . . But the meteorologist is impotent if alone; his observations are useless, for they are made upon a point, while the speculations to be derived from them must be on space." The truth of these words is realised more forcibly to-day than ever before, and it is remarkable that they should have been written so long ago.

The 1836 Society developed pronounced astrological tendencies as time went on, and this fact appears to have led to the foundation of the present Society in 1850. Mr. J. Glaisher, F.R.S., was secretary of the Society from 1850 until 1873, except during 1867–68, when he was president, and apparently his was the guiding spirit in the earlier years of the Society. The distinguished engineer Robert Stephenson, F.R.S., was president in 1857–58. Until 1866 the Society was a voluntary association of members, but in that year a Royal Charter of incorporation was obtained whereby members of the British Meteorological Society became fellows of the Meteorological Society. In 1882 permission was obtained from Queen Victoria to change the name of the Society to that at present in use, namely, the Royal Meteorological Society.

In conformity with the ideas expressed by Ruskin, the Society at first devoted itself to the expensive task of the collection and publication of meteorological observations from a number of stations, chiefly in England and Wales, as well as to the reading, discussion, and publication of original papers. For it will be recalled that in 1850 there was no State provision for meteorology in Great Britain. The results of this work are printed in the "Meteorological Record," which was published annually from 1881 until 1910. In 1911 the work was transferred to the State service, the Meteorological Office. Many investigations were undertaken by the Society in its corporate capacity, and brought to a successful conclusion; among these may be mentioned the collection of phenological observations from the area of the British Isles, and the annual publication of a phenological report in the Quarterly Journal of the Society. This enterprise is still vigorously pursued, the whole of the work of observation and compilation being voluntarily given. In 1919 the Scottish Meteorological Society, which had been founded in Edinburgh in 1855, was dissolved, and as many members of that Society as so desired were received as fellows of the Royal Meteorological Society.

The celebrations on April 21 and 22 took the form of (1) a visit to Kew Observatory, by invitation of the Director of the Meteorological Office; (2) a conversazione in the rooms of the Society at 49 Cromwell Road, South Kensington; (3) an anniversary meeting, when a lecture on "Clouds and Forecasting Weather" was delivered by Prof. E. van Everdingen, president of the International Meteorological Committee and Director of the Royal Netherlands Meteorological Institute; and (4) a dinner at the Hotel Rembrandt. About 75 persons attended the various functions, and the guests included members of the International Commission for the Exploration of the Upper Air, who had previously held meetings at the Meteorological Office under the presidency of Sir Napier Shaw.

The visit to Kew Observatory during the afternoon of April 21 was much enjoyed, fine weather favouring the event. The visitors were shown over the observatory, and had the experience of witnessing the release of a registering balloon.

The conversazione on the evening of April 21 was held in the rooms of the Society and the visitors were received by Mr. C. J. P. Cave, president of the Society, and by Mrs. Cave. A number of exhibits, many of which had been lent for the occasion by fellows of the Society, were arranged, and Mr. F. J. W. Whipple showed a number of experiments, including the formation of halos, coronæ, and the green ray.

The anniversary meeting on the afternoon of April 22 was the principal event in connexion with the celebrations. The president welcomed the four honorary members who were present, namely, Prof. W. van Bemmelen, lately Director of the Batavia Observatory; Prof. E. van Everdingen; Prof. H. Hergesell, Director of the aerological observatory at Lindenberg; and Prof. Th. Hesselberg, Director of the Norwegian Meteorological Service and secretary of the International Meteorological Committee. The president then read a telegram which had been sent to His Majesty the King, patron of the Society, and the reply from His Majesty, which concludes: "The King rejoices in the thought that recent years have seen important advances in the science, and he earnestly trusts that the Society will be able to record still further developments in their valuable and interesting labours." Afterwards a number of addresses of congratulation were read from foreign meteorological institutes and other scientific bodies, and from a number of private persons, including a letter from the venerable Prof. H. Hildebrandsson of Upsala, foreign member.

Prof. E. van Everdingen then delivered his lecture on "Clouds and Forecasting Weather." He said that failure to forecast the weather 24 or 36 hours ahead can be ascribed to lack of suitable observations, among which are those of the motion of high and medium clouds. He showed an example of the improvement in the forecasts which would have been produced had cloud observations been available, and put forward a strong plea for the regular observation and transmission of information regarding cloud motion. The methods of the "weather-wise," who use only local observations to foretell coming weather, are ill-defined, but it is not difficult to account for many of their maxims in the light of modern knowledge, as derived from aerological research and the observation of clouds from aircraft. The main object of cloud-observation for the professional forecaster ought to be to tell him something definite of the atmospheric conditions in the upper air over the whole area of his map. Inversions of temperature usually occur over cloud-sheets, and if the latter are identified at a number of stations, the horizontal

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