

News and Views

Sir Napier Shaw, F.R.S.

THE Council of the Royal Meteorological Society has made the *Quarterly Journal of the Royal Meteorological Society* of April 1934 a special "Shaw Number", in honour of Sir Napier Shaw's eightieth birthday. Sir Napier Shaw has done a great deal to educate English people to a recognition of the practical importance of meteorology. Under the title "The March of Meteorology" he has contributed to his own number of the *Journal* a valuable collection of random recollections. This contribution is, besides being much else, an inner history of the evolution of the Meteorological Office during a period of about thirty years which followed his first connexion with official meteorology. One of Sir Napier's greatest personal contributions to meteorology has been connected with the thermodynamical theory built up around the idea of the Carnot cycle—a conception of an ideal heat engine often despised by students of engineering as being of no conceivable practical significance. In his "Manual of Meteorology", the general circulation of the atmosphere receives masterly treatment with the aid of this cycle and of the special diagrammatic framework with temperature and entropy as abscissæ and ordinates which he has named the 'tephigram'. Although the full harvest from these ideas is perhaps still to come, they have thrown light on many atmospheric processes previously only very imperfectly understood. Another important contribution, and one that greatly advanced weather forecasting with the aid of synoptic charts, was the "Life History of Surface Air Currents" (1906). This was the joint work of Sir Napier and his personal assistant, R. G. K. Lempfert. This study, in his own words, "began the analysis of the motion of the air of a cyclonic depression into distinct currents which has been so fruitful in the hands of the Norwegian meteorologists". By the writing of these reminiscences at the age of eighty, Sir Napier Shaw shows the staying power characteristic of so many eminent scientific workers who became prominent in a period when the troubles of civilisation were less all-pervading, and he reveals in them the broad outlook more common in a less specialised age.

Weather Observations

A SUPPLEMENTARY contribution to the same number of the *Quarterly Journal of the Meteorological Society* by Col. E. Gold follows Sir Napier's with the title "Incidents in the March, 1906-1914". This deals with a number of aspects of the work of the Meteorological Office not touched on by Sir Napier, among which may be mentioned the important contributions to the relationship between barometric pressure gradient and wind force, and to radiation in the atmosphere, made by the writer himself, and to the perhaps even more important pioneer investigations of G. I. Taylor in the subject of atmospheric turbulence, carried out during his tenure of the Schuster readership at Cambridge. It was

during those years that the weather observations made at the health resorts were brought under official control, with the result that a reasonable degree of intercomparability has ever since existed in the tabular weather summaries published in most of the morning and evening newspapers, whereas formerly observers had almost unlimited opportunity for creating a false impression of the amount of sunshine to be expected by visitors favouring their own locality. The vexed question of the most suitable units to be used in British meteorology is also touched upon, a question that does not admit of easy solution seeing that the units that satisfy the meteorologist and are intelligible to the ordinary citizen of France and Germany, are not popular with those who, through not having been educated in natural science are unfamiliar with the c.g.s. system and the centigrade thermometer.

Water Supplies and Emergency Legislation

THE letter from Vice-Adm. Sir Percy Douglas, chairman of the British Association Research Committee on Inland Water Survey, which appeared in the *Times* of June 14, is an opportune reminder that something more than merely emergency measures to meet the present water shortage is necessary, if the administration of water supplies in Great Britain is to be placed on a sound and satisfactory basis. There may be in the popular mind a tendency to regard the recent appointment of an expert committee to advise the Ministry of Health on measures for dealing with the effects of the present drought as the sum total of all that is possible or due to be done in order to avert disagreeable and even disastrous consequences at any future time. But, as was pointed out in a leading article on the subject in *NATURE* of April 28, the root cause of the trouble lies much deeper, and will remain untouched by such superficial and temporary relief expedients as may present themselves for adoption during the existing crisis. In contradistinction to the practice prevailing in leading countries abroad, there is at present in Great Britain no official body charged with the duty of ascertaining available sources of supply and of gauging their extent and capacity, still less of supervising their distribution to the general advantage of the community. The necessity for a thorough investigation of the position in regard to both surface and underground yields is abundantly evident, and it would be foolish to disguise the fact, as Admiral Douglas so strongly emphasises, that "before it is possible to allocate the water supplies of the country an intensive and fully complete survey of the resources available is indispensable, and, however well-planned the present emergency measures may be, the need for a systematic national survey remains".

British Science Guild

THE annual report of the Council of Management for the British Science Guild, 1933-34, presented at the annual general meeting on June 12, refers to the

activities of the Parliamentary Science Committee, the headquarters of which are at present at the offices of the Guild. The Committee is already supported by a number of scientific and technical associations, and active steps are being taken to secure the active interest of the majority of scientific societies. The Guild continued during 1933 to make representations to the Government regarding the importance of continuing the work of the Research Association of British Rubber Manufacturers, which the Committee of the Privy Council has now agreed to assist by an annual grant for five years. A preliminary memorandum on the development and finance of industrial research has been issued by the committee set up jointly with the Association of Scientific Workers, and arising out of a meeting of the Committee questions have been raised in Parliament regarding expenditure on wireless research by the Post Office and British Broadcasting Corporation. The question of adopting the French system of automatic time transmission by telephone has been raised with the Postmaster-General and is under consideration. Attention has also been directed to the importance of scientific research in connexion with the newly formed marketing boards.

LAST year a lecture was instituted by the Guild to direct attention to the importance of research and the utilisation of its results in the service of mankind. Largely through the generosity of Lord Melchett and Lord Weir, there has now been instituted a series of such research and development lectures designed especially to bridge the gap that exists between those engaged in national affairs and the man of science. Abstracts of the two lectures of this series given this year by Sir William Bragg on "Refrigeration" and by Lord Rutherford on "Helium and Other Rare Gases" are appended to the report. The report directs attention to the unsatisfactory condition of the Guild's finances. There is a deficit of about £400 a year, but thanks to the offer of a member of Council, it has been possible to arrange to utilise capital during the next three years while a three-year plan is put into operation including a programme similar to that of 1933, every possible assistance to the Parliamentary Science Committee and a sustained effort to increase the annual income.

Science and the Nazis

GERMANY'S latest regulation affecting scientific inquiry may be the logical consequence of principles accepted in that country, but is none the less curious. Herr Julius Streicher's deputy, according to a correspondent in the *Times* of June 13, has issued an order prohibiting scientific lectures on racial questions, since they have a "diluting and distorting effect on the Nazi *Weltanschauung*". Professional men of science, it is added, are not equipped with the necessary knowledge and honest conviction and their lectures are, therefore, a danger to the true Nazi creed. If this statement has any basis at all in fact, it can only mean that German men of science are either too honest or have too keen a sense of the incongruous to accept and reproduce the official Nazi

travesty of racial history with which Herr Hitler has hypnotised himself and the German masses. The entire suppression of lectures in one branch of study, however, enforces the lesson that the relation between science and State action is one of extreme delicacy, and that any attempt to drive politics and science in double harness in the interest of a theory of racial or social regeneration, as has been done in Germany, and was attempted in framing the immigration laws of the United States, risks the suppression of honest, but unpopular, inquiry. It is surely inconsistent that the advocates of racial purity in their own part of the world, in their further programme for dealing with Jews, should suggest that the thirty millions of this people should be quartered among the inhabitants of Madagascar.

Central American Hurricane and World Rainfall

WHILE a large area in North America has been suffering from unprecedented drought, a part of Central America has recently experienced a very severe hurricane, although it is early in the hurricane season. A very small proportion only of the tropical storms of the West Indies and neighbouring mainland occur in the first half of June, the time of maximum frequency being not far from the autumnal equinox. The storm in question appears to have passed north-westwards across Salvador before reaching the Mexican coast; it was accompanied by exceptionally heavy rains that caused serious floods. To these floods is attributed the great loss of life, variously estimated at a thousand and at two thousand or more. In the *Times* of June 13 it is stated that the Honduran town of Ocotepeque, near the Guatemalan border, was entirely destroyed. It may be recalled that in 1933 there was a 'record' number of West Indian hurricanes. This early and disastrous opening for 1934 seems ominous. When rainfall is deficient in middle latitudes, there is no more likely place for finding an excess sufficient to keep the world's fall at about its normal amount than in the hurricane belt, and the coincidence of exceptional drought in North America and exceptional storminess in the West Indies may possibly not be fortuitous. Approximate constancy of the world's total fall cannot, of course, be proved or disproved, in the absence of exact measurements over the oceans, but it may be noted that the sun's radiation tends to appear more constant the more exactly it is measured, which seems to suggest that the average rainfall for the year—indirectly dependent, doubtless, on solar heat—may not vary greatly.

Archæology and the Economic Crisis in the United States

EXCAVATIONS on a number of archæological sites in various States, undertaken as part of the emergency measures for the relief of unemployment under the Civil Works Administration in the United States, have produced material which, according to a statement issued by the Smithsonian Institution of Washington, it will take years to work out in detail. So satisfactory have been the results that in several States the work is to be continued by a State subvention now that the grant of the Civil Works