WEATHER BUREAU AN AID TO AVIATION AND ARTILLERY SERVICES.

[*Reprinted from* Department of Agriculture Weekly News Letter, June 12, 1918.]

In cooperation with the Signal Corps, United States Army, the Weather Bureau is providing and maintaining for the duration of the war aerological and meteorological observations at a number of aviation and artillery fields. For use at these fields tables [1] of mean values of atmospheric pressure, temperature, and density, and a paper on "Meteorology and Aeronautics" have been published.[2]

In connection with searchlight tests conducted in February and March at Washington by the Engineer Corps of the Army, the Weather Bureau made some kite flights at night. Other flights were made in daylight in connection with studies of atmospheric electricity conducted by the Bureau of Standards.

CLIMATOLOGY AND AN ABANDONED FLYING SCHOOL.

[*Reprinted from* Nature, London, May 30, 1918, 101: 247-248.]

The "Times" of May 20 contains a summary of the third report of the Select Committee on National Expenditure, which gives the material facts about the abortive scheme of the War Office to establish at Lock Doon, Ayrshire, a large school for the training of airmen in gunnery. It is a striking and very expensive example of that incoherence or lack of coordination under stress against which the discipline of science as a part of education should be our safeguard. In 1916 the Air Board wanted an aerodrome for special purposes, and found a site at Loch Doon which would fulfil their requirements provided that a peat-bog on the western side of the lake could be drained and certain engineering work carried out on the eastern side. Taken independently, both these conditions could be satisfied, and operations were set on foot. By May, 1917, the estimated cost was £350,000; afterwards, large further sums were being asked for to complete the scheme; but, though each item had been separately satisfied, the object was not achieved. The climatic conditions were quite unsuitable for a training school, the local "bumps" were a great drawback for the special purpose of the aerodrome, the conditions of the surrounding area placed intolerable restrictions upon its use, and on account of the increased speed of flight the engineering works were already out of date. In January, 1918, the Air Council decided to cut the loss and abandon the scheme.

Looking back at the evolution of this fiasco, various points are evident. The air authorities apparently worked by the map, the engineers considered only the questions of draining a bog and constructing certain railways, hangars, etc., not the making of an aerodrome; and the vexatious details of the climate of the British Isles were left to express themselves in their own inexorable way when the mechanical operations had been provided for. The last is, perhaps, the most instructive feature of the situation. Climatology is the science which uses the common experience of past weather to safeguard the future of all operations that depend upon weather. Its basis of fact is merely organized public memory. The Meteorological Committee, in its reports, has frequently urged that, in the public interest, local authorities should keep suitable records. If this course had been followed in Ayrshire, some £500,000 might have been saved. But our local authorities have not yet acknowledged the duty.

It has been left to the meteorological societies, or the Meteorological Office, or the British Rainfall Organization to collect such observations of weather as are made for country landowners or by meteorological enthusiasts in various localities; the distribution is naturally haphazard. Moreover, with the possible exception of the water engineer, the people who have to carry out such schemes have no training in the use of the collected information or in how to find it, and without some experience the tables are difficult to use. Much of the information requires reworking in order to answer special questions. For those who know where to look for it, there is a vast mine of information about the climatology of the British Isles, but it is largely unworked for lack of schools devoted to such sciences. An authoritative compilation is much needed. The Royal Meteorological Society, in cooperation with the Meteorological Office, began to work the data for a climatological atlas shortly before the war, but has had to dicontinue the task for the present. It was thought at the time to be an undertaking of great utility, but that its "present worth" might run to six figures in a single case was clearly not realized.

SOVEREIGNTY OF THE AIR AND ITS RELATION TO CIVIL AERIAL TRANSPORT.

[*Reprinted from* Nature, London, May 9, 1918, 101:191.]

An interesting article appears in the Fortnightly Review for May under the combined authorship of Mr. Claude Grahame-White and Mr. Harry Harper. The title is "Sovereignty of the air and its relation to civil aerial transport," and the authors discuss the conditions which should be adopted for the regulation of air traffic after the war. Three plans are considered—the air may be completely free to all; it may be under the sovereignty of the country over which it lies; or a combination of these is possible by making the air free to all only above a specified altitude. It is pointed out that if war could be abolished by international consent, a free air would be the best solution. It is, however, fairly obvious that, for at any rate some years after the declaration of peace, the nations will be forced to take strong defensive measures in the air, and the only solution of the problem rendering this possible is a complete sovereignty of the air. The authors are of the opinion that commercial aeronautics will make great advances in the near future, and that the rapid intercommunication possible by the use of aircraft will do much to foster the development of friendly sentiments among the nations, and so to advance progress toward the goal of universal peace. They suggest also the desirability of a universal language to facilitate international relations in general, and this is certainly a point which can not be overlooked. The whole question of international relations after the war is one of absorbing interest, and the article under discussion is worthy of perusal by those whose thoughts turn to the aeronautical side of such relations.

[1] *See* this REVIEW, January, 1918.
[2] National Advisory Committee for Aeronautics. Report No. 13. "Meteorology and aeronautics, by *W. R. Blair.*" Washington, 1917. 50 p. 8°.