determined by legal enactment. But these, in fact, and as they were presented, have only a remote connection with science.

There is a double reason for the inconspicuous appearance of the scientific side at meetings of the British Association for the Advancement of Science. The results of research, if they are to be useful to other workers, or even if they are to increase the scientific reputation of their authors, must receive quick and effective publication. The organ of the British Association is a bulky annual volume, costly to buy, slow to appear, and cumbrous on private shelves. Prudent investigators prefer other means of making known their work, and hence offer to the association very little that is new. The traditional policy of successive councils, or more probably of the general officers who are the effective managers of the association, has been to cater for numbers rather than for quality. Hence the tendency in favor of the popular. Hence the continuous increases in the numbers of the sections and sub-sections, the wish to provide for any subject that can be alleged to have a connection with science. The theory no doubt is that these outer circles should be infiltrated with the scientific spirit. The practical result is that many papers are accepted by the British Association which are better suited, were they certain of acceptance, to specialized congresses, or to local debating societies. An excuse that is offered for this policy is that large attendances mean large receipts and the possibility of making large grants for more research. A sum of over £1,300, it is proudly stated, is to be provided for research by reason of the success of the Bournemouth meeting. Twelve sectional committees put in their claims on it, and a general committee, supposed to contain, and actually containing, some of the best brains in Great Britain, had to meet in solemn conclave to allot this vast sum.

The British Association does some good work. It could do much more. It serves as a meeting ground of men engaged in different branches of science. Were they not swamped by the camp-followers and separated by subdivision, they could really come together for the double purpose of social contact and of discussion of the technical methods on which the progress of science depends. It is the great annual opportunity for the publicity of scientific work. The more necessary that it should avoid the popular "copy" which has always a ready access to the lay organs of publication. The more vital that it should present the highest aims and needs of science. What is most vital is that it should insist on the advancement of science simply as knowledge, and not merely as a means to practical utilities. Certainly in the recesses of some of the sectional meetings, and in a few of the formal addresses, there was insistence on pure as opposed to applied research. But the small voice of the true scientific spirit was drowned by the resounding advertisement of the practical utilities that had come from science. Moreover, it frequently became shrill with personal protest—protest from scientific men who thought that they had been neglected or controlled by "practical" men. We do not dispute that the protests were sometimes just, and that it may have been useful to make them. But the nation, and perhaps even the government, which is a very different thing, will listen more readily to science at its best. And the best voice of science is neither protest, promise, nor boasting, but the proclamation of the intrinsic worth of knowledge spoken with faith and imagination.—The London *Times*.

SCIENTIFIC BOOKS

Un manuscrit inédit de Dolomieu sur la minéralogie du Dauphiné. Grenoble, imprimerie Allier Frères, 1919, 50 pp. 8vo.

We are indebted to Professor Alfred Lacroix, Secretaire Perpétuel of the Académie des Sciences, for the publication of an inedited manuscript of Déodat de Dolomieu. This treats of the mineralogy of the old province of Dauphiné, and embodies notes sent to Dolomieu by the city librarian of Grenoble, Du Cros. As a little of the nomenclature has become obsolete, Professor Lacroix has here and there supplied (in parentheses) the modern equivalents, and in a very brief

introductory note he gives a few details regarding the manuscript, which he believes was written in 1795 or 1796. One of the most interesting of Dolomieu's statements regards the gold deposits of La Gardette, an elevation in the southern part of Dauphiné.[1] Here gold was found in a quartz vein traversing a gneissic formation, at about 1,500 feet above the plain of Bourg d'Oisans, in the present department of Isère. As early as 1717 peasants are said to have picked up here yellow stones which when assayed in Grenoble were found to contain gold. In 1778 serious attempts were made to work this vein and a certain quantity of gold was extracted, a part of which was sent in the form of an ingot to the Comte de Provence, later Louis XVIII, who caused a medal to be struck out of this gold.[2]

G. F. K.

NOTES ON METEOROLOGY AND CLIMATOLOGY

THE TRANS-ATLANTIC FLIGHTS AND OCEAN WEATHER MAPS

Although some attempt has been made to post daily weather maps of the North Atlantic in the New York Customs House, the occasions of trans-Atlantic flights first brought forth daily weather maps of the North Atlantic from which oceanwide forecasts were made. In fact, for a short time in the middle of May such weather maps were being made every six hours from weather reports received by radio from European and American land stations and from the five American battleships and ten destroyers spread over the Atlantic between latitudes 36° and 51° N.

Unfavorable winds for the flight of the NC planes to the Azores lasted until May 16, when in the rear of a low pressure trough, fair weather and westerly winds prevailed from Newfoundland nearly to the Azores. Thinking (justifiably, as it proved) that such favorable conditions would not last long and would not continue again for some time, the forecasters advised that conditions were favorable for the start of the flight to the Azores. The second stage of the flight of the NC-4 to Lisbon was delayed till the twenty-seventh, when a following wind appreciably shortened this long flight. A detailed account of "The first trans-Atlantic flight," with 14 weather maps of the North Atlantic, May 12–20 and 27–31 and of the forecasts in this connection, by W. R. Gregg and E. H. Bowie have been published in the *Monthly Weather Review*, May, 1919, pp. 279–282, 347.

In addition to such weather information as the Americans gave the British aviators on this occasion, the British Meteorological Office was actively engaged in getting weather reports from merchant ships on the ocean along the route from Newfoundland to Ireland. As many have no radio outfits, and as only an occasional ship can send reports more than a few hundred miles, the conditions along this course have been but poorly known in time to be helpful. Stormy weather on either coast kept aviators from starting, but the lack of stormy conditions on either coast did not mean safety in mid-ocean. Messrs. Hawker and Grieve, after leaving Newfoundland, May 18, ran into the northern part of the storm which was so distressing to the crew of the NC-3. In spite of climbing to a considerable height they were unable to get above the clouds; and the strong north wind hindered their progress appreciably.[11]

Although Messrs. Alcock and Brown also experienced considerable cloudiness, the wind conditions, strong westerly all the way, appear to have been ideal for their flight from Newfoundland to Ireland, June 14–15. If they flew on a great circle course the average speed was about 120 miles an hour.[12]

By the time the R-34 was ready to make its trip to America, the receipt of weather reports by radio from vessels at sea was better, though there were great stretches from which no in-

[1] *Op. cit.*, pp. 16–20.

[2] In Professor Lacroix's great work "Minéralogie de la France et de ses Colonies," Vol., 1897, p. 422, this medal is figured.

[11] See *Monthly Weather Review*, May, 1919, p. 283.

[12] See account and weather maps in the *Monthly Weather Review*, June, 1919, p. 416, charts X. and XI.