

It would seem that a great deal more exact observation of boulder clay fabric is called for. Careful measurements on the lines of C. D. Holmes's work may yield very valuable results.

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SCOTT SIMPSON

6 January 1949.

The Editor,
The Journal of Glaciology

SIR, *The Snow Survey of Great Britain*

If I may briefly reply to Mr. Hawke's letter in the last issue of the *Journal of Glaciology*, I should like again to emphasize the need for caution in drawing generalizations on snowfall for the entire country from a limited number of stations. This particularly applies to comparisons with the past, for which, as Mr. Hawke himself admits, data gradually become more meagre and less reliable. The Survey after all has to work, so to speak, on a grid, in which must inevitably occur large meshes of unrepresented country very significant in a land of complex physical relief like Great Britain.

Take the very month which Mr. Hawke quotes, namely December 1890, which was so rigorous in the South, especially round Oxford. I am old enough to remember as a child that very severe season when a large meadow at the back of my home in a London suburb was continuously white from 27 November to 21 January 1890-91. From this personal experience taken in conjunction with all I heard at the time about the prevailing conditions and read about them in the ensuing years I cannot but feel that in this particular case the three stations quoted by Mr. Hawke as having had thirty-one days of snow cover in December 1890, namely, New Radnor (Wales), Walthamstow (Essex), and Diss (Norfolk), were much more representative of Southern England as a whole than the five others quoted by him with considerably fewer days, namely Babbacombe (Devon), Ross (Hereford), Rotherby Hall (Leicester), Derby and Salisbury. Mr. Hawke quotes Babbacombe as having had only four days of snow cover but even if this figure is reliable and representative of any considerable stretch of this much indented coast I heard a very different account from a family of cousins living inland in Devonshire. They spoke of being continuously under snow for several weeks, thus supporting my own experience in Middlesex, with only a clear month in February before the onset of the famous blizzard of 9 March in that part of the country. Northward of Lancashire and Yorkshire the season was milder and there was little snow in Scotland, as Mr. Hawke observes, except at high levels.

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L. C. W. BONACINA

24 April 1949.

SIR,

On being invited to cite documentary evidence for his assertion that "in 1890-91 most of England was continuously under snow from 27 November to 21 January," Mr. Bonacina tells us merely of a large meadow at the back of his boyhood home in a London suburb which, according to his recollection, remained white over exactly that period. And this after he has enjoined caution in drawing generalizations on snowfall from a limited number of stations. All regional climatic studies depend on "a grid in which must inevitably occur large meshes of unrepresented country"; outside Utopia we cannot have an observing post for every square mile. Official summaries and averages of rainfall, sunshine, temperature and other elements are necessarily thus derived. Is not the method equally valid for the Snow Survey with its copious data from a well-distributed host of observers, plus the returns courteously supplied to us by the Meteorological Office?

Ivinglea, Dagnall.

E. L. HAWKE

28 April 1949.