## Flowering Dates of Trees.

REFERRING to Mr. J. E. Clark's interesting article on the above subject in NATURE of February 16, I would suggest that a consideration of the different variations of temperature between Falmouth and London will help to solve the problem. From phenological observations I have made at Falmouth for many years past, it would appear that on an average this district is earlier than nearly all other parts of England in January and February by about a fortnight, but that after those months the lead is lost and the flowering and leafing of trees, etc., are retarded by our situation being near the coast line, where the waters of the European current play such an important part in lowering the land temperatures in summer and raising them in the winter. It is not always sufficiently realised how much longer the sea requires than the land to gain its summer heat and then to lose it again. Thus we find from the records of 41 years that the mean temperature of the sea in December is 50·1°, whilst in January, February, March, and April it is less, viz. 48·0°, 47·0°, 47·3°, and 49° respectively.

The following table (1920 being taken at random) shows that in January and February our mean temperature is higher than about London, but during March, April, and markedly in May, it falls behind and it is only natural that the effect on the flowering and leafing of trees, etc., should be as described by Mr. Clark.

| | FALMOUTH. | | | KEW | |
|---|---|---|---|---|---|
| 1920. | Mean of daily Max. and Min. | Mean for 50 Years, 1871-1920. | Mean of daily Maxima. | Mean of daily Max. and Min. | Mean of daily Maxima. |
| | ° | | ° | ° | ° |
| January | 44·4 | 43·4 | 49·3 | 42·7 | 47·5 |
| February | 46·1 | 43·4 | 50·7 | 43·4 | 49·8 |
| March | 45·5 | 43·9 | 51·5 | 46·6 | 54·1 |
| April | 48·7 | 47·5 | 54·1 | 49·3 | 55·2 |
| May | 53·4 | 52·2 | 59·3 | 55·6 | 63·9 |

WILSON LLOYD FOX.

Falmouth, February 24, 1922.

## Where did Terrestrial Life Begin?

IN reference to Mr. Dines's letter in NATURE of February 16, if the diurnal variations in temperature and humidity on a mountain summit in the early earth would have been smaller than at sea-level, my objection to Dr. Macfie's theory would certainly not hold. But Mr. Dines remarks that, assuming some stratification of the atmosphere, the stirring up of the lower levels might cause a temporary raising of the temperature at higher levels, which is the basis of my objection. Mr. Dines points out that if the early atmosphere had been homogeneous, mountain summits could not have been warmed by ascending air, while if the air had been stratified vertical movements would have been impossible; but that dilemma does not seem applicable to the conditions likely when the earth had just cooled down to a temperature at which life was possible.

My conception of the probable geographical conditions at the dawn of terrestrial life is that the seas would have been small, but were growing from water discharged from steam vents, which would have kept the lower air hot and saturated. Above the steam-charged layer the air temperature would have fallen quickly (as the surface would have received less heat from the interior and have lost more by radiation), so that the cooling by expansion of air rising up a mountain side would have been small and might have been largely counteracted by latent heat set forth by the condensation of moisture. Distrustful of my own capacity in thermodynamics, some years ago I asked an expert on that subject, in reference to another problem in primeval geography, whether the last condition was possible, and he replied that it was. The geographical conditions which would seem most favourable for spontaneous generation from some inorganically formed carbohydrate would be in a moist atmosphere in which the temperature would have been practically uniform. Unless those conditions held on a mountain summit, some lower position for the origin of life would seem more probable.

J. W. GREGORY.

February 20, 1922.

## The Name of the Gid Parasite.

IN 1910 (U.S. Dept. of Agriculture, Bureau of Animal Industry, Bull. 125) Dr. Maurice C. Hall published a most interesting historical account of the gid parasite, a cestode worm which is exceedingly destructive to sheep. He showed that the first available specific name for the worm was *Taenia multiceps* of Leske, 1780. At the same time he rejected the familiar name *Coenurus* of Rudolphi because Goeze in 1782 had said that the parasite might be called "Vielkopf (*multiceps*)." I protested at the time to Dr. Hall that "multiceps" could scarcely be taken as a valid generic name. Goeze was not a binomial writer; he actually called the gid parasite Taenia *vesicularis cerebrina*. *Multiceps* seems to have been introduced simply as the Latin form of the common name proposed, *vielkopf*. Now, after the passage of years, I again have occasion to refer to the gid parasite and I find no ground for altering my opinion. Apparently the animal should be called *Coenurus multiceps* (Leske). The matter is important, on account of the injuries caused by the parasite, and consequent frequent references to it. I observe that Railliet and Henry (1915) and Railliet and Marullaz (1919) accept *multiceps* as a valid generic name.

T. D. A. COCKERELL.

University of Colorado, Boulder, Colorado.

## The Weathering of Mortar.

IN regard to statements in NATURE of June 23 and July 21, 1921 (vol. 107, pp. 523 and 652) to the effect that the curious ridges and furrows which occur in mortar in walls are due to the segregation of lime, I would invite attention to a note in Proc. Dorset Nat. Hist. and Antiq. Field Club, 1906, vol. xxvii. p. xxxii, giving an account of an exhibit of mine of a series of pieces of mortar from a wall showing the early stages of the development of this phenomenon. The appearance is caused by the growth of moss in minute shrinkage cracks in the mortar, the sides of the cracks being gradually disintegrated by the roots of the moss, until the final stage of ridge and furrow is reached and the moss, not having sufficient root-hold, falls out when dry.

I may add that since then I have tested the mortar in the ridges and also some from the general body below the surface, and can find no difference in the proportion of lime contained in the two.

NELSON M. RICHARDSON.

Montevideo, near Weymouth, February 24.