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Unreviewed Mixed Matters Article:

The Effect of Climate Change in Experimental Archaeology

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When you are planning your experiment how many of you think of the climate and whether it matches the period that your experiment is based in? Depending on the type of experiment there are many factors that may influence the results. You need to consider parameters such as; humidity, ambient temperature, how effective your clothes are, burning the right firewood, keeping a shelter warm, or the quality of the grass that your animals are living on.

Considering the climate change we are going through, a lot of thought needs to be put into an experiment in order to match the pre-historical\historical conditions you are trying to

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emulate.

I am already encountering effects, in the construction of prehistoric buildings. Over the last fourteen years I have had the privilege of researching, designing, and constructing, a complete generation of prehistoric buildings at Butser Ancient Farm.

In 1970 when the 'Butser Ancient Farm Project' was first mooted, it was decided the climate in the 70's was comparable to that of the late Iron Age. Therefore, in 1972 when Peter Reynolds became the first director of the farm, this limitation was kept in mind. This influenced the production of timber, the growth of grass, the crops and the growing season.

For the last 14 years, I have maintained this assumption as a steering mechanism while I've been experimenting with a new generation of buildings at the farm. However over the last 3 or 4 years there has been a distinct change in the way that the buildings have been behaving. Two of the changes concern the availability of materials, the production of timber, particularly during the process of coppicing (the wood is not growing in the same way). The timber used in the building of the houses is now growing faster and is therefore not as stable. The thatch used on the buildings is bought in, i.e. not produced on the farm. However, there has been a noticeable change in the quality of the straw in particular. The thatch is poorer quality, and is proving to be less reliable in providing a waterproof coating. The implications in the change of material means that it is not as easy to build a house accurate to the late Iron Age.

Another major factor over the last 2 years has been a greater insect infestations in the buildings. Any house without a fire in the hearth becomes a target (or lunch, depending on how you look at it) and they are eating away at the framework of the building, purlins in the lower roof seem to be hit the hardest, with hazel being targeted in particular.

The conclusion? Long term, it is becoming harder to estimate the lifespan of a building, and it will affect the frequency of repairs. Monitoring is going to be important, to help spot the changes. Perhaps we have got to face the fact that as far as buildings are concerned, the iron age is no longer the period that can be explored?

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FIG 2. REPAIRING A ROOF. COPYRIGHT: G.D. FREEMAN

FIG 3. ROUNDHOUSE RECONSTRUCTION. COPYRIGHT: G.D. FREEMAN