

## TimeSigns Episode 4

### The Final Harvest

*This is a transcript and selected images from Channel 4's Time Signs programmes in order to ensure that the narrative is preserved. To view the full episode, please visit [4 on Demand](#).*



**Surface Structures**

We're reaching the point where the final time signs for the Wolf's history are coming to light. This is in many ways the valley's final harvest, the historical remains that have taken through to the past. Our journey began with the surface structures, the homes of the families that last farmed the valley. To the cobbled floors of the deserted nineteenth century villages. The leather shoes and pieces of pot that were once the property of earlier seventeenth century generations. The evidence of the mill and its medieval past. The hedgelines and documents that took our story back to Domesday and possibly beyond. Before the coming of the Normans and their Saxon predecessors, the valley's past would have been part of the prehistoric period, the time when the first farmers using stone implements felled the trees and planted their crops. It is to this earlier evidence that we now turn.

'Well, the reason I'm walking around this field here, this ploughed field, is because somewhere near here, near Seccombe Farm, an object like this was found. And, of course, being an arrowhead, it was probably fashioned for either hunting, certainly animals, possibly people. Of course, we've found a number of burials now with flint arrowheads buried in them, embedded in their bones. And so we would want to know really is whether or not this indicated anybody was actually living here or not. We would need to do more work perhaps to solve that. But if, for example, there was a lot of other bits of flint with this, then we might think that this was settlement, that they'd been working flint to make tools of one sort or another, among some arrowheads. Perhaps this one was lost. That's one possibility. Or if it is staying on its own, and they often do occur on their own or perhaps with other arrowheads, perhaps we're actually looking not at a settlement area but at where the actual hunting took place. Perhaps this was lost, either because the chap who fired it was a poor shot and actually missed his dinner that day. Or perhaps it did lodge in the animal, the animal survived and perhaps died somewhere else and the arrowhead is deposited there. All of those are possibilities.'

The hunters following game would have been the first people to walk into the valley. They depended on their hunting skills for survival. The technology that they possessed was based on the cutting edge of flint. And this naturally-occurring material, used in combination with other materials available in the woods, dominated the world of early man for over 5,000 years. The ax, spear and arrow were the main implements. And the bow-and-arrow was perhaps the most effective weapon against animals or other men.

'We've collected everything we need to make arrows from the woods. There's the pine resin that came out of the pine trees. There's the bee's wax, courtesy of the bees. There's the hazel which we've collected and feathers for the mate(?) deflections.'

The final ingredient added to these materials to produce a weapon that could kill was fire, needed to make the glue that would weld arrowhead to shaft.

'The idea of making a fire is to heat the bee's wax and pine resin which, when they're melted together, form a very, very efficient natural glue. It's a very nice glue in that it can always be re-used. You just break it off where you used it before and melt it down again, and it's a very, very efficient glue. With a spear, if you're trying to kill an animal from cover, it means that you give yourself away very, very easily by throwing a spear. So that from a point of view of range, and from secrecy, a bow-and-arrow is a much, much more efficient implement.'



*Making an Arrow*

*[another]*'One could almost guess that people who were hunter-gatherers used the valley, passed through it, chasing animals perhaps deer, horse, whatever they happened to be hunting at the time. But this would merely have been one small part of their world. They would not perhaps have lived here, they may have been here for hours or perhaps days at a time. They may well have been on the coast at times, they may well have been on the edges of Dartmoor at other times. They needed to do that in order to be able to exploit whatever resources happened to be in season at the time.'

The hunters who left behind the arrowhead gradually evolved into people who wanted to settle in the area, to clear land and plant crops. These were the first farmers, who combined both agriculture and hunting. The signs of their presence can be looked for in the oldest material in the valley, the peat deposits.

'Those people who suffer from hayfever will know all about pollen. The air is full of pollen all the time. This pollen falls onto the landscape and usually either grows or rots away. But in waterlogged conditions such as we get on Dartmoor and such as we've got in many parts of this valley, you get that pollen preserved in a sort of waterlogged sandwich. It's totally waterlogged, it doesn't rot away and it encapsulates a sort of sequence of what the landscape was like around. Now we know from elsewhere in the country that the landscape of Britain by about 6,000 BC was densely forested, more or less from end to end. All the species we're familiar with, oak, ash, elm and so on dominated the area and hunter-gatherer peoples lived in this area. And then of course farmers come in, cut down areas, start to farm areas, use of animals in the area and so on. And very often the preserved pollen gives us that picture of wooded landscapes gradually being cleared, clearances, regeneration, woodland finally being opened up. So we could expect in a valley like this to get our earliest evidence of people from that sort of information.'

*[another]*'I think about here would be suitable for boring. I'll just clear the surface. Peat is something which many people just regard as material you throw on to your garden, you put in your plant pots, you stick round your roses and so on. Of course, to me as a scientist, I regard this as rather a waste of a valuable resource, a waste of valuable information, because the peat itself consists of the remains of the plants that were actually growing here at this particular site. And so it's the leaves,



**Gathering the Peat Sequence**

the stems, the root fragments which haven't been broken down because the site's waterlogged or it's been waterlogged for most of its time. And so the natural processes of decay and so on haven't been able to act here. So the peat itself contains evidence of the plants that were growing at the site over the last 4 or 5,000 years.'

*[another]*'When we first found this field by using the hand augur, we managed to work out the depth of the peat. But there are lots of areas along the field in which the augur only gave us a very rough picture of what the deposits were like. So in order to be able

to understand the sequence completely, we need to dig long trenches across the flood plains so we can understand how the river's moved over. After that, we may be able to interpret how and why the peat was developed. We're going to take a sequence of monolith tins, which are large metal tins, which are around 50 centimetres long. And they will be bashed into the face section all the way down the sequence. And from these, pollen samples will be taken, I believe at 2 cm intervals all the way through the tin. So that we can build up a picture of vegetation change through time, from the bottom of the sequence which is sitting on the river gravels, which would have been the old riverbed perhaps 4,000, perhaps 6,000 years ago, and look at the change in vegetation over time. And also we've taken samples for dating, amongst the silts and the clays and the peat to be able to date the sequence. So we've got us a dating framework to hang all of this information on.'



**Layers of Peat in Tin**

'We've got a dark line in the peat which may reflect a period of management of this area, of maybe burning off vegetation. Or it may have something to do with oxidation or reduction, which are fluctuations in the actual water table. Until that's been looked at in the lab, we won't be able to say any more on that.'

*[another]*'We know that the upper peat here, the 65-70 cm of depth, does go back to about 2,000 BC. And at about 25 cm depth, we are something like 1600 AD. So we've got quite a narrow band of peat covering quite a long time period. I'll get this sealed away as quickly as possible. You've got to try and bag this quick on a day like today when it's in the middle of June. There's a lot of plants around, pollen is being dispersed. Nice stratigraphy with brownny layer and this black layer and grey-brown lower down.'

'One more, try to keep all the moisture in. When we get them back, we'll probably put them in the fridge. I will take these samples back to the laboratory where I will then take sub-samples which we will boil up with various acids and alkalis, to effectively remove everything except the pollen remains that are present. In addition to the pollen, we'll also be looking at some of the plant remains, the larger plant remains, like seeds and leaf fragments, because these will also help to add a bit more information compared to the information we derive from the pollen. Because the pollen may be blown in from anywhere, whereas the seeds will tend to have accumulated fairly locally.

*[lab assistant]*'I've got a date of about 630 AD for this level.'

'When I start looking at the pollen, I will be hoping that I get some very sudden changes. Sudden changes in pollen sequences suggest things, and they suggest that there's been some sudden change on the land surface, sudden change in the adjacent vegetation, or they may suggest that there's been some disturbance at the site. And so one starts looking very closely where you get sudden changes in pollen sequences.'



*Pollen Grain*

*[lab assistant]* 'Have a look at this one, about 80 cm depth from the surface. And we had a radiocarbon date of 2,500 BC in the other sections at that depth. It would be interesting to see what we've got there.'

'There's certainly a difference because we've got a lot of hazel, we've got quite a few grains of pine, we've got more fern spores, much less alder. Take a look at that one, it looks like [scientific name], one of the [scientific name], suggesting we've got quite a few open ground indicators of particularly disturbed ground.'

*[lab assistant]* 'But no zero ground yet.'

'Not seen any that I would regard as zero yet.'

Disturbed ground indicators may sound like a fairly dry scientific description. But it represents a highly significant historic event, the first sign of early man preparing the ground for planting. We all know that when we dig up our gardens, the weeds invade the clear ground. And it's the same process that the peat records. It acts like a kind of organic tape recorder. It signals trace pollen that fell from the trees and plants on some warm summer's day in the distant past. From these time signs we know that the hill slopes of the valley were covered by oak and elm woods, prior to their destruction by man which began 5,000 years ago.



*Natural Woodland*

'This is a sort of natural dense woodland that the first neolithic farmers would have encountered when they came to the valley perhaps 3 to 4,000 BC. As you can see in its natural state, it's totally unsuited to agriculture. And first of all, all these trees had to be cleared. We don't know quite how fast the amount of de-forestation was, but certainly by the end of the neolithic, vast parts of this

country had been cleared of the natural woodland. And all they had at their disposal for the job was this, a flint ax. Now here we've got two extremes; behind me, the natural woodland still to be cleared and in front of me, a small plot, which is the sort of area that they might have cleared when they started to make their first fields.'

*[another]*'The change from hunter-gatherers to farming people is probably the most important thing that's happened in the landscape in the last 10,000 years or so. In the hunter-gatherer periods, people are very dependent on animals, raw resources, berries, plants, fish from the coast and rivers and so on. And they operate over a wide area of country. They tend to perhaps be at the coast in the summer, in a sheltered valley in the winter. They will move about a lot. Now with farming, you've got a totally different situation. People need to be sedentary. They need to look after their crops. They can still perhaps wander around with their animals, but they need to have a rather more fixed home base. Now our evidence of those early farmers suggests they went for certain sorts of country. They went for land that could be opened up easily, cleared easily, and my guess was this was rather poor quality land for the early farmers.'



**Flint Blade**

The earliest farmers made use of a wide range of flint instruments in their battle to survive. From axes to clear the trees and hunting equipment to flint scrapers for animal skins. This was a technology that had to involve contact with the outside world. Flint does not occur naturally in this area of Devon and so any pieces that were found had to be introduced by people. As the water begins to cover the lower sites, field walking still continues in the fields at the edge of the waterline. A flint blade has been discovered which may well be one of the earliest pieces of physical evidence. The signs of the blow which formed it can still be seen on the blade's surface.

'This is a blade that was found in a field locally. It is very likely that somebody making blades deliberately is going to either drop into the category of what we would call mesolithic hunters, the middle Stone Age, or the earliest neolithic peoples which is a time when people were beginning to settle down and where you start getting things like forest clearance. You certainly get a mixed, probably get a mixed economy there where people are actually growing crops, also hunting as well. But at that stage, you're getting the earliest settled communities. And one of the strongest characteristics which indicate that it was made by a human being is that on this surface here, there are a series of concoidal rings. And on the other side, there is a swelling which is called a bulb of percussion and again, more concoidal rings. We can say for certainty that the actual blow was delivered at this point up here. And it's a very nice blade.'



**Swelling on the Flint**

'Blade technology is a deliberate act and a piece of flint has to be shaped before blades can be removed. This is probably one the first sounds *[making blades]* from human industry that you would have heard in the valley. So we've got in a position now where we've got this ridge, down which I hope the force of the blow will be carried and hopefully we'll remove a blade. I've trimmed up the edge of the piece of flint so that that edge should be strong enough to allow me to remove the blade. That's a blade, it's a bit thick, but it's a blade. You can see that this fits back onto the core like that. Here's the ridge which guided the force of the blow. And when I take it away, you can see that



it has now created a nice strong ridge down that side and there are the beginnings of another ridge there. So the next part of the sequence would logically be to take this blade off here which hopefully would then accentuate that ridge. So that we can then move alternately back across the surface of the core and take more blades off. Well you can begin to see the sort of products and the sort of activity that is likely to have been going on. And what the piece that was found in the field would have looked like. You have here something which is very, very similar, characterised by two ridges down the front and, in this instance, we've also got the blade that came off the front of it which we can put back into place.'



*Making a Flint Blade*

'This blade in itself is a perfectly functional tool. With a simple modification of snapping off the two ends, you could employ it, join it up together with a series of blades in a wooden handle. The blades can be glued into the wooden handle using combinations of natural resins and that gives you a much greater length of cutting edge. It's a very efficient tool. It can be used for such things as cutting grass, straw or even reeds. You can see from that too how clean the stems have been cut through. I mean



*Flint Cutting Tool*

it really is a cutting implement. It doesn't, it's not just simply a tearing instrument. It does actually cut through the reeds.'

The concerns of the first farmers to bring the harvest safely in, to thank whatever gods they believed in for success, and to prepare the land for the year ahead, started a cycle that each successive generation has in its own way maintained. *[hymn singing]* Between the first planters of crops and the farmers who left the valley to make way for the reservoir, there would have been a common understanding.

*[minister]* 'A harvest festival to celebrate and give thanks for the goodness of God. And the harvest supper afterwards just to make sure that it tasted as good as it looked.'

The trail of time signs that links their history says more about continuity and persistence of this kind of life than it does about vast historical changes and upheavals. 4,000 years of man's occupation in the valley have changed the landscape only marginally. Our effect on the landscape today are drastic and more permanent. They can not only destroy a way of life but also the historical evidence that provides us with a vital perspective on our modern world. In this way, the time signs are the points where the past and the present meet. And in this valley, they represent the final harvest of what the past can tell us.

Transcribed by Kim Baldacchino

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