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Ancient Monuments Laboratory
Report 19/90

PRELIMINARY RESULTS FROM THE TRIAL EXCAVATION OF THE CURSUS DITCHES AT POTLOCK, DERBYS.

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Summary

Trial excavations at Potlock, Derbyshire, were sampled for charred plant remains as part of the over-all assessment of the site's potential prior to planning a research design for excavation. Preliminary results on the charred plant remains from a Neolithic cursus ditch produced only a small amount of cereal and wild plant remains, suggesting that this part of the ditch may not have been very near any domestic occupation. However, the charred plant remains were heavily impregnated with iron salts and it may be that poor recovery has biased the results. Further trial sampling will continue.

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PRELIMINARY RESULTS FROM THE TRIAL EXCAVATION OF THE CURSUS DITCHES AT POTLOCK, DERBYS.

by Lisa Moffett

The programme of archaeological assessment carried out at Potlock included sampling for charred plant remains. Since charred plant assemblages are preserved by coming into contact with fire, they usually include the remains of plants which have been in some way associated with people. These can include cultivated and collected food plants, crop weeds, weedy species living in other habitats associated with man, plants used for animal fodder, and plants used for non-food purposes such as fuel, bedding or building materials. The main aim of the sampling at this stage is to determine which types of features may be most worth sampling, what degree of intensiveness of sampling is likely to be most cost-effective, or indeed whether the site is worth sampling for charred remains at all. The assessment is still continuing, and will include samples from the Iron Age settlement as well as the early prehistoric features. A few preliminary results are available from some samples taken from the late Neolithic cursus ditches and these are the subject of this short report.

Four samples were analysed from the south cursus ditch and 2 from the north ditch. These included a black layer in the south ditch, as well as a grey surface underneath it, a brown sandy loam layer below the grey surface and a grey deposit above the black layer. A grey sandy silt from the north cursus ditch was sampled, and a grey gravelly fill from the western section of the north cursus ditch was also sampled (G. Guilbert pers. comm.). The samples were processed by flotation using a York sieving machine with a 500 micron mesh. The flotation was not entirely successful due to the fact that the charred material was heavily impregnated with soluble iron salts and some of it was too dense to float - a problem also encountered with some samples from a ring-ditch at Holme Pierrepont (Moffett forthcoming). The flotation problem was apparent from the fact that fragments of wood charcoal remained in the mineral residues left after flotation. It is not known if seeds remained in the residues and if so how many. The residues were too large to sort microscopically and a cost-effective method of improving recovery of charred material has yet to be worked out. It is

hoped that whatever conditions caused the iron impregnation to take place have not affected the whole area of the site.

Since the flotation recovery was clearly incomplete and different types of charred material may have been differentially affected in their ability to float, the material which did float cannot be taken as a reliable indication of the amount and type of material present. Although this has defeated part of the aim of the assessment, at least until more effective recovery can be designed, the presence of some identifiable charred material is indicated by the material which did float.

There were not enough seeds from any one sample to be able to interpret the material as an economic or ecological 'assemblage', and therefore all the items recovered from the south cursus ditch are listed together, as are all the items from the north cursus ditch (see table below). As expected, the black layer from the south cursus ditch did produce more seeds than the other samples but these were still too few to base valid deductions on.

The cereals present were wheat (Triticum sp.) and barley (Hordeum vulgare). One of the barley grains may possibly have been a naked type but preservation was poor. The presence of cereals indicates arable agriculture, but not necessarily that it was taking place at Potlock. Raspberry or blackberry (Rubus idaeus/fruticosus) may have been collected for food. Hazel (Corylus avellana) is nearly ubiquitous on early prehistoric sites and is notable by its absence here. Hazel nutshell fragments are dense and relatively heavy at the best of times, however, and under the circumstances may well not have floated. Chickweed (Stellaria media type), fat hen (Chenopodium sp.) and ivy-leaved speedwell (Veronica hederifolia) are weeds which invade gardens and arable fields but will also grow in many other disturbed ground habitats. Onion couch (Arrhenatherum elatius) tubers are common on early prehistoric sites. It has been suggested that grasses including onion couch may have been uprooted for kindling (Robinson 1988), and also that the tubers may have been eaten (Godwin 1975).

It was not expected that large numbers of charred plant remains would be found in the cursus ditches. Charred plant remains are most likely to occur near areas where plant material has a high chance of exposure to fire, such as hearths, ovens, 'corn driers' and malting kilns, or areas which accumulate domestic refuse such as rubbish pits, floors and middens. Given this, and the problems with flotation

recovery noted above, it is encouraging that any charred seeds were found in the flots at all. Perhaps this indicates that there was some occupation, even if small and temporary, in the fairly near vicinity.

References

Godwin, H. 1975. History of the British Flora (2nd ed.). Cambridge: Cambridge University Press.

Robinson, M. 1988. The Significance of the Tubers of Arrhenatherum elatius (L.) Beauv. from Site 4, Cremation 15/11. In Lambrick, G., The Rollright Stones: Megaliths, Monuments, and Settlements in the Prehistoric Landscape, p.102. London: Historic Buildings and Monuments Commission for England.

Acknowledgements

I would like to thank Graeme Guilbert for information about the site and English Heritage for providing the funding for this work.

POTLOCK PRELIMINARY TABLE OF CHARRED PLANT REMAINS

South cursus ditch (09), 4 samples = 97 litres

Triticum sp.	2	Wheat
?? Hordeum vulgare var. nudum	1	Naked barley
Hordeum vulgare	1	Barley
Cereal indet.	8	
Stellaria media type	4	Chickweed
Chenopodium sp.	2	Fat hen
Rubus idaeus/fruticosus	7	Raspberry/blackberry
Veronica hederifolia	1	Ivy-leaved speedwell
cf. Cyperaceae	2	Sedge family
cf. Poa sp.	1	Meadow-grass
? Arrhenatherum elatius tubers	2	Onion couch
Tree/shrub buds	2	
Unidentified	5	

North cursus ditch (04), 1 sample = 20 litres

? Shoot tip	1	
Unidentified	1	

Western section of ditch (07), 1 sample = 30 litres

Cereal/Gramineae	1	
Gramineae indet.	1	Indeterminate grass

So far 10 other samples have been examined from 02, 03 and 04 but these contained no charred plant remains apart from a very few fragments of wood charcoal. The total volume of these samples is 162 litres.