

The story of a flint blade from Aberdeenshire

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Figure 1: Flint blade found from field walking along the River Dee

This flint blade is just one of thousands of flint tools found during fieldwalking along the River Dee by the Mesolithic Deeside group. It was probably made and used during the Late Mesolithic, at least 7000 years ago. It is striking for the beautiful band of dark grey set in the middle of the blade and this translucent flint appears to be of a better quality than the local gravel flint which was most commonly used for tools along the River Dee in the past. We do not know where the flint for this particular tool came from.

Was it hafted?

As well as the unusual colouring and banding, I was interested in this blade because of a small lump of hard material adhering the edge of the tool – visible as a small red patch on the right hand edge of blade in Figure 1. Could this be a trace of hafting residue which had been used to secure the tool into a wooden or bone shaft? Hafting residue made from birch tar is occasionally found on prehistoric lithic tools but it needs scientific analysis to identify the origin of the substance.

I asked Dr Aimée Little from the University of York to advise me whether this mysterious material could be identified and she very kindly asked her colleague Dr Alexandre Lucquin to help. Using biomolecular analysis he investigated the make-up of the material but was unable to extract any organic residues from the sample. This suggests that either it is too degraded to identify the original material, or else it is a mineral adhesion acquired during deposition. So unfortunately no clear evidence for hafting was present.

How was it used?

Whilst the blade was in the Archaeology Department at York, it was passed on to their microwear specialist Jess Bates. She has been working to identify the uses of the flint tools from the large Mesolithic site at Star Carr in the Vale of Pickering and was well set to study the Aberdeenshire blade. When a flint tool is used, the material and actions alter the surface of flint by leaving microscopic polish and striations behind. Through experimental replication of these polishes archaeologists can identify the types of material e.g. wood, bone or hide that were being worked and whether it was being cut, scraped or sawn. Amazingly, Jess was able to confidently identify traces of microscopic polish which had formed on the tool whilst it was being used. Here is what she had to say.

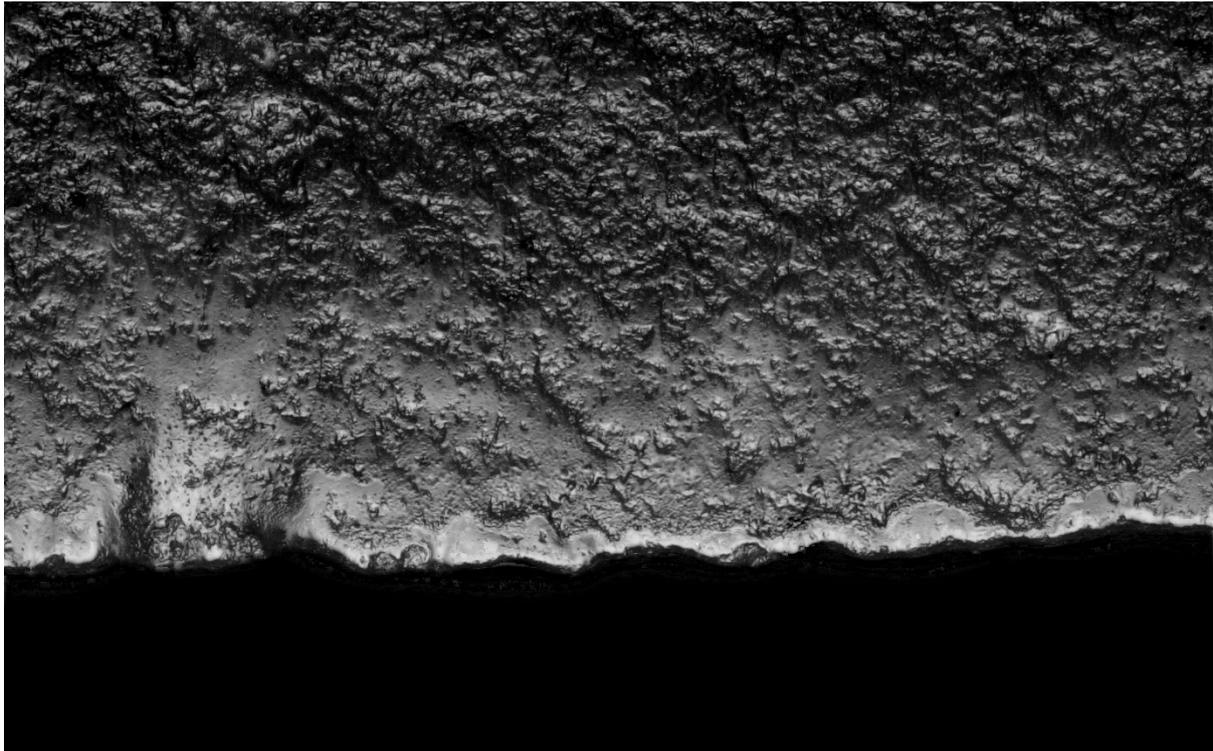


Figure 2: More developed polish shows on the right side of the ventral face of the blade.
Image at 200x magnification

'The blade was used and had some nicely developed polish on it. As seen in Figure 2 the polish was bright and smooth, running perpendicular to the flint edge, with some fine striations. The polish observed wasn't particularly invasive, so it was probably not used for a long duration. My interpretation is that the blade was likely used for scraping plant/soft green wood for short duration - polish as a result of plant working develops relatively quickly (owing to the moisture content and stickiness of the material) so the tools don't have to be used for very long before we can see a polish on them (c.10-15 minutes, depending on the exact type of plant/green soft wood). As the polish is not overly invasive, it is probable that the action was similar to a scraping motion and the fine striations are likely the result of dirt or grit inclusions as the plant/soft wood was scraped. From flint that I have looked at that has been used for whittling willow fronds, the polish on the Deeside blade is very similar, however we can never be so certain of a specific material as there are a number of variables which impact the development and preservation of the archaeological polish'.

So we have a flint blade that may have been used to cut withies or grasses or a similar material.

But that is not all...

As Jess looked at this Aberdeenshire blade it reminded her of a tool she had previously studied from Star Carr. She has captured them together in the photograph of Figure 3 with the smaller Star Carr blade at the top and the Aberdeenshire blade at the bottom. The similarities of material, and placement of the black band across the centre of the tool are remarkable. Is this just a coincidence? Could they possibly be from the same flint nodule? We are unlikely to be able to answer these questions. But it does remind us to look beyond the single site or find spot and to wonder at how far the Mesolithic population would have travelled, where they went and who they met up with along the way.



Figure 3: Star Carr blade top, Aberdeenshire blade bottom. Photo by Jess Bates

Thank you!

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