

THE PREHISTORIC WORKSHOP 'HAFTING CHALLENGE'

THE CHALLENGE

In 2024, The Field Detectives presented Steph and Neil of the Prehistoric Workshop with a challenge to see if they could fashion a set of hafts for three stone artefacts that had been found in South Nottinghamshire. These amazing objects are fascinating to look at, especially when we begin to comprehend how old they actually are. What we wanted to know was how they were used and what they would have looked like before the wooden hafts that would have adorned them all those years ago had long since disappeared from view.

"Our Hafting project was initiated by The Field Detectives - a group of historians who have lent us a Neolithic polished axe head, a stone mace head, and a stone spindle whorl to experiment with different hafting techniques and materials. We thank them, and were so excited we got started straight away." Steph and Neil - The Prehistoric Workshop



POLISHED NEOLITHIC FLINT AXE HEAD

Polished axes define the Neolithic Period (4000 to 2500 BC) and coincides with the beginning of flint mining and mass production. This is the period where farming begins, and therefore the clearance of trees making these axes the tool of the period.



STONE MACE HEAD - 2800-2100



A Spindle Whorl is a perforated object attached to a shaft used to spin yarn. They can be made from bone, stone, wood, metal, glass and ceramics. Evidence exists of textiles and weaving in Georgia from the Palaeolithic period (27000 - 35000 years ago). In the UK, we have evidence from the Neolithic period onwards. They are notoriously difficult to age as the technology to make them has not changed for thousands of years.

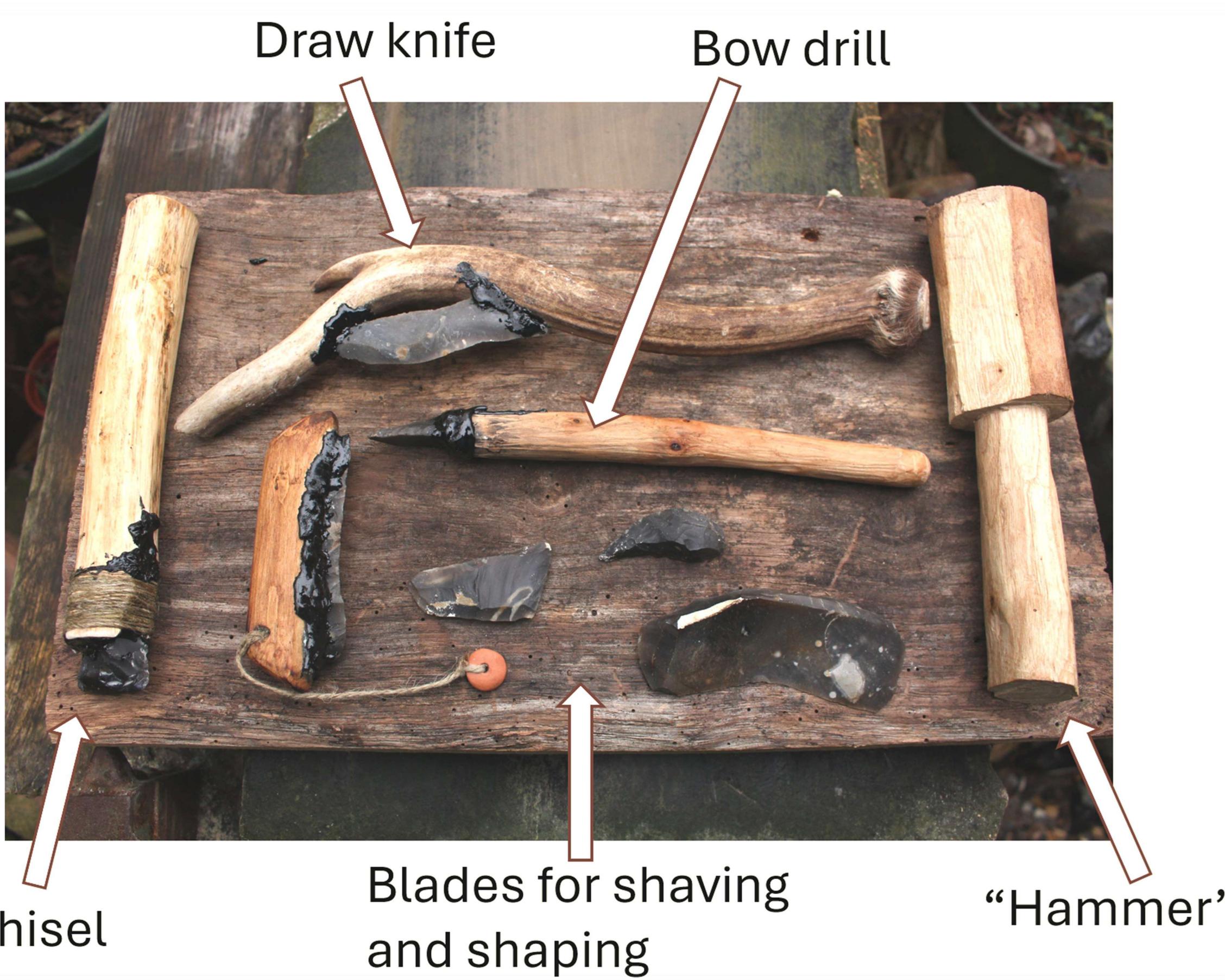
WHAT IS HAFTING?

Hafting is the process of attaching a tool to a handle or strap. Wood, bone and leather are commonly used. When archaeologists find ancient stone and metal tools such as axe heads, or weapons such as spear/arrowheads, often the haft has decomposed leaving no trace.

TACKLING THE CHALLENGE

The Prehistoric Workshop's first step was to work out the right selection of materials to see if they could ensure the hafts would deliver the required strength, comfort, and durability that these artefacts would have needed. Different timbers serve different purposes, offering different levels of strength and flexibility, which our ancestors completely understood. The Cherry timber Neil used is a hardwood that is perfect for many types of woodworking projects. It is famous for its rich tones that deepen as the wood ages. It offers superb workability, strength, stability and provides high impact resistance. Ash wood is another excellent option for axe grips as it offers a balance between strength and flexibility, making it suitable for absorbing impact without splintering. Oak is durable and offers a sturdy feel, making it ideal for heavy-duty tasks. However, Oak is less flexible than Cherry or Ash, so it is more prone to breaking if not treated correctly. Birch offers a good mix of flexibility and strength, making it suitable for lighter tasks. It is less durable than other hardwoods but still serves well for general use.

THE TOOLS



DE-BARKING, SHAPING & SHAVING

De-barking the wood - Leaving the bark on traps moisture between the bark and wood, and also encourages insects to burrow into the wood. De-barking is therefore essential to make the haft last. The Flint Adze tools, as shown above, are perfect for this.

Shaping & Shaving the hafts – in traditional woodworking today, we would use a draw knife and/or spokeshave to shape and finish the timber. The flint blades hafted in a forked branch and deer antler, as shown above, are the Stone Age equivalent of these and work extremely well.

CREATING THE MORTICE & FITTING THE AXE HEAD



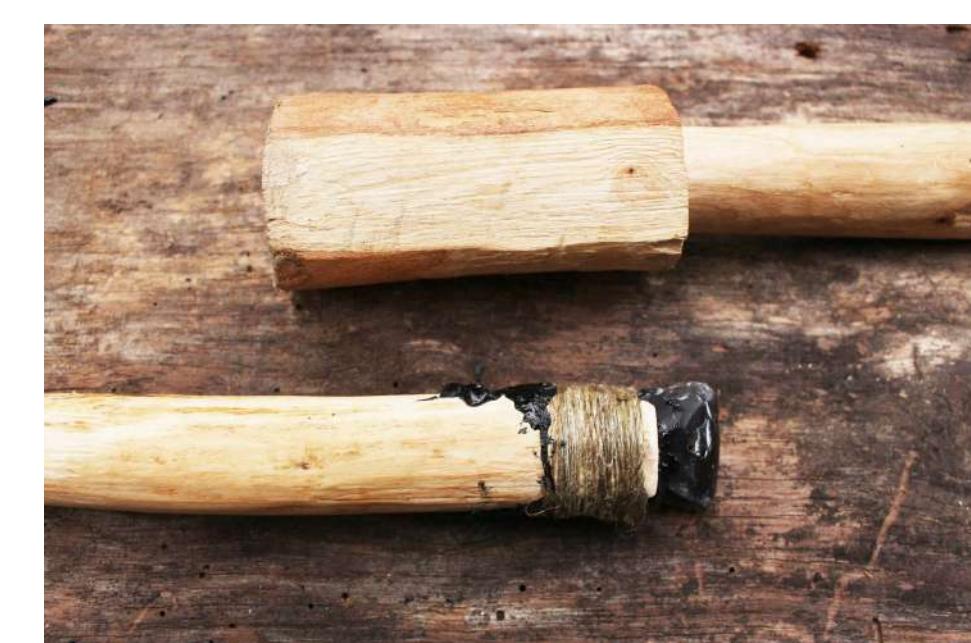
Protecting & Creating Longevity of the haft with Linseed Oil

Linseed = Flax seed which we find ancient examples of in archaeological contexts.

Flaxseed is used for oil, food, fodder and fibre.



CREATING THE WEDGE TENON & FITTING THE MACE HEAD



Prehistoric Glue – Tapped resin from pine trees, heated and mixed with charcoal. It can be made portable by adhering to a stick. The original glue-stick!

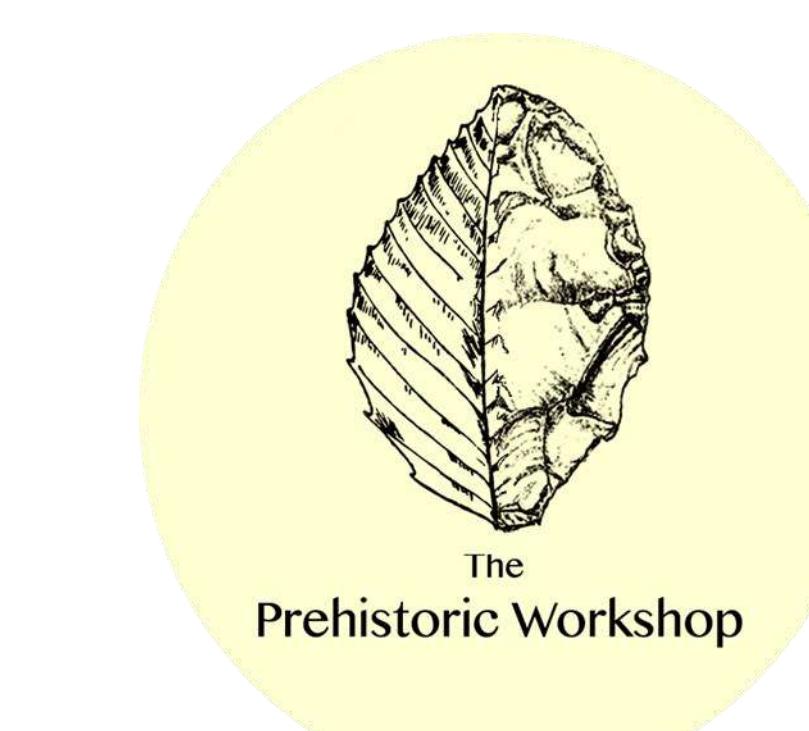
FINDINGS - AXE & MACE HEAD

- For every traditional woodworking tool we use today, a flint tool equivalent can be made
- The use of the wedge tenon joint on the mace head is debatable, but there are very limited alternative methods to this, considering the size of the hole. The length of the mace haft could also be longer or shorter, depending on the user's preference. It could undoubtedly act as a pretty vicious Stone Age weapon
- The production of the relatively small mortice in the axe haft is what provided the biggest technological challenge – in the end, using a simple flint blade and piercer proved easier than chisel or bow drill, but was very time-consuming
- In the role of felling trees, Neolithic polished axes could not have functioned without the haft. Although we hardly ever get to see the hafts due to decomposition, their manufacture was equally as important as the axe
- We have a huge appreciation for Neolithic craftspeople and what they produced

SPINDLE WHORL FINDINGS



- Flint tools worked beautifully, especially a side-notched scraper, which we find a lot of when fieldwalking
- The size and weight of a whorl play a big part in the choice of yarn – e.g. wool, flax
- Variables are length of staple (raw fibre), desired thickness of finished yarn
- No indication of top or bottom spinning whorl – personal preference



The Prehistoric Workshop
Neil Bevan & Steph Horak

