



The end of the last Ice Age was characterised by an episode of intense climatic warming from about 16,000 years ago (14,000 cal BC). This transformed vegetation and fauna. By 13,000 BP (11,000 cal BC) summer temperatures may have increased by 1°C per decade. The general warming trend was intermingled by a succession of short episodes of warm (interstadial) and cold (stadial) phases which meant Late glacial hunter-gatherers needed to adapt continually to this rapidly changing environment (Figure 1). During the stadials, large herds of seasonally migrating reindeer and horse inhabited the open tundra environment of the British Isles. As these large herds were widely dispersed throughout the landscape, the hunters were highly mobile, their settlement patterns comprising of a variety of temporary camps, including for butchering activities and technical tasks revolving around flint. During the interstadials, the landscape was transformed into a mosaic landscape covered in light woodland in the south and an open tundra environment to the north. Correlating with this transformation of the vegetation were changes in the Postglacial fauna. The large herds of reindeer and horse migrated northwards and smaller, more solitary ungulates, such as roe deer and wild pig, inhabited the forests.

The archaeological record reveals a complex picture with a variety of different assemblages (groups of artefacts) that have been termed 'Final Palaeolithic'. In this Late glacial period they can generally be divided into three distinct phases: Firstly, a 'penknife-point' phase which was characterised by backed points which were probably used as projectile points fitted into arrow shafts (Figure 2.1). Secondly, a phase marked by 'tanged points' which were also fitted into arrow shafts (Figure 2.2). Thirdly, a 'long blade' phase which was characterised by particularly large blades used for cutting wood and bone (Figure 2.3). While the 'penknife-point' phase is generally associated with warmer conditions, the 'tanged point' and 'long blade' traditions are generally linked to cooler phases, including a focus of the hunters on cold-adapted species, such as reindeer and horse.

In Britain over 200 Late glacial sites have been recognized from characteristic flint tools but only a handful of major Final Palaeolithic sites have been excavated so far. Among them is Hengistbury Head in Dorset, a large open-air site featuring tanged points which was probably where hunters could meet close to the migrating routes of reindeer and horse. Another famous Late glacial findspot which features several archaeological sites is Creswell Crags, a limestone gorge located on the border of Nottinghamshire and Derbyshire. The cave sites are 50,000–10,000 years old and the gorge represents one of the most northern places Late glacial hunter-gatherers visited. The western chamber in Robin Hood's Cave yielded a unique find, a fragment of a rib bone featuring the oldest known engraving in Britain, possibly representing the head of a horse ('The Ochre Horse'). In addition, several engravings have in recent years been identified on the walls and ceilings of the caves, including the representation of a stag. The 'Ochre Horse' and rock art have been dated to 13,000–15,000 years ago during the so-called Allerød interstadial (c. 12,000–10,800 cal BC).

A later site which has been associated with the following cold-phase (so-called Younger Dryas stadial) and which has recently been re-excavated is Flixton Island II. This site was located at the former lake Flixton (a palaeolake) in North Yorkshire where several Final Palaeolithic and Early Mesolithic sites have been documented (see Mesolithic Factsheet 1). The assemblage consists of several long blades which were associated with horse remains and dates to about 10,000 cal BC. Interestingly, evidence of horse butchery has been identified, particularly in association with the long blades. Moreover, two Late glacial lithic and faunal scatters have been excavated at Three Ways Wharf in the Colne Valley, Uxbridge. The assemblages have been defined as belonging to the 'long blade' phase. They are associated with reindeer and horse dating the Late glacial site to ca. 10,000 BP (c. 9600 cal BC). In addition, a scatter belonging to the succeeding Mesolithic period has been identified at Three Ways Wharf dating to c. 9200 BP (ca. 8700 cal BC). This period is

characterised by rapidly increasing temperatures which ended the last Ice Age and resulted in a forested landscape across large parts of Britain. In line with these changes in the vegetation and fauna, the Early Mesolithic scatter at Three Ways Wharf is associated with roe and red deer. A detailed investigation of well-preserved sites, including Three Ways Wharf, can aid archaeologists in understanding how humans responded to this rapid climate change.

### Further Reading

**Barton, R.N.E.** 2005. Britain at the end of the last Ice Age. In: N. Barton *Ice Age Britain* (English Heritage) (second edition): 121–138. London: B. T. Batsford

**Smith, C.** 1992. *Late Stone Age Hunters of the British Isles*. London: Routledge

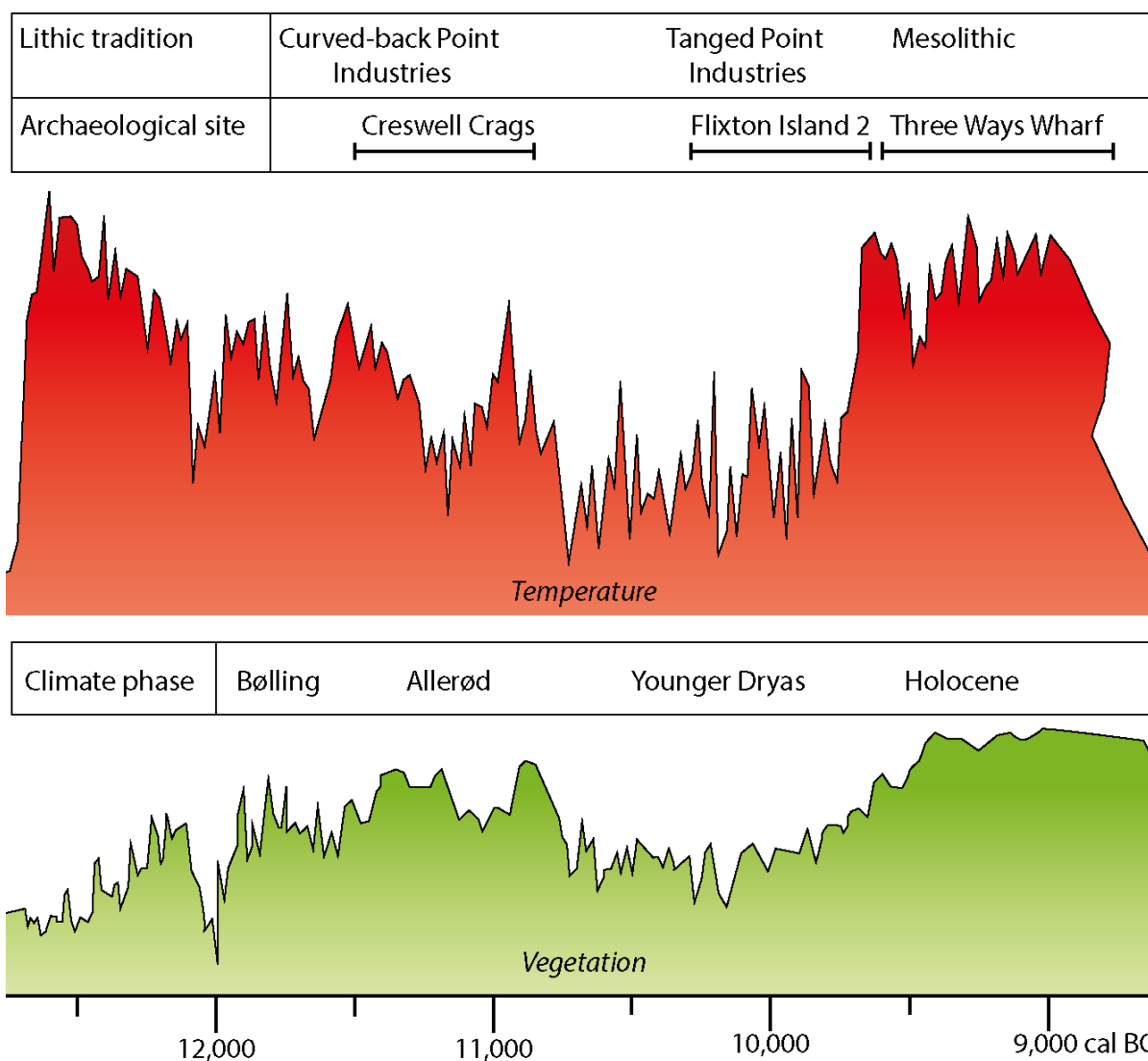


Figure 1: Diagram showing the variation in temperature and vegetation at the end of the last Ice Age, including the different climate phases, lithic traditions and a selection of archaeological sites (Diagram by H. Robson).

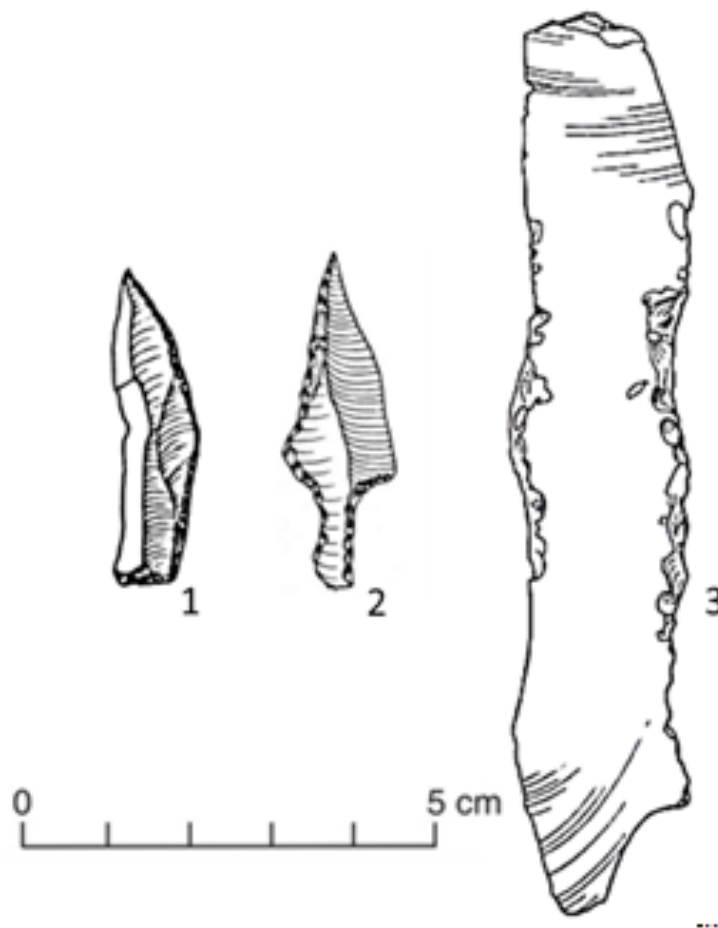


Figure 2: Examples of 1: pen-knife point; 2: tanged point; 3: long blade with use traces (redrawn by A. Zander from Maier 2012; Taute 1968, Lewis and Rackham 2011).

*This factsheet was prepared for the Prehistoric Society by Annabell Zander (University of York)*