

A fascinating meeting - Willy introduced us to the art of bow making and making arrows (or should that be “fletching”).

Willy started by giving a short history of arrows and their development. Mostly arrows were made using Ash, though both Poplar and Alder were also used at various periods.



He illustrated his talk by passing around various arrows and explaining their design and use. The photo shows a primitive arrow head on the right and going from right to left it shows a stone age flint arrow head, a bronze age one and finally an iron age example. The heads of the bronze and iron age ones were small because the metal was scarce and therefore precious and not to be wasted. There followed other examples including Roman, Saxon, Mediaeval and Tudor style arrows. There were arrows with a wooden ball as the head for shooting birds and then there

were designs with long, narrow points for penetrating chain mail. Yet others with large heads looking like harpoons were designed to kill horses. Willy explained that horses were regarded as valuable and they preferred not to kill them and so a sickle shaped head was used to fire into the hind quarters to make it rear and panic in the hope that it could be collected later and the wound treated so the horse would be useful again. Other chisel-shaped heads were used to penetrate armour. As today men were very ingenious in their ways of trying to overcome their enemies' latest inventions.

The top four arrows in the photo are “fire arrows” and basically consist of a fuse wrapped around the head.

Willy explained that originally the arrow shafts were made parallel along their whole length. This meant that men of differing strength had to have arrows of differing length due to their ability to draw back the bow. This made the logistics of supplying arrows very complicated. This problem was apparently overcome by the use of arrows tapered towards the flight end. This allowed standardising to two lengths only and made the logistics much simpler.



Goose feathers were used to form the flights and arrows found on the Mary Rose were found to have a green coloured resin bonding the feathers to the shaft and analysis showed the “glue” to consist of a resin, verdigris, beeswax and turpentine. The verdigris caused the experts to scratch their heads but they now believe that it was included as an insecticide to protect the feathers from attack during storage.

Bows were made of various woods but Ash and Yew were predominant. The production of a bow starts with a stave which is placed in a shave horse and one side flattened, the other which will be the inner face is kept rounded. Once shaped the bow has a rough string fitted and is placed in a “tiller” which basically is an upright clamp with a rope passing through a ring placed near the base. The rope is hooked onto the string and then the rope is pulled to flex the bow. The object of tillering is to see if the bow bends in an equal and even curve on both sides. If it does not then some wood is removed from the inner face of the stiffer arm. It is then tested again and the process repeated until everything is equal and even. Apparently the King's bowyers were not permitted to work after dark because it was critical that all the war bows should correctly set up.



According to Willy that when the weather turned wet the English archers would remove their bow strings and put on their heads and then put their hats on to keep them dry. This apparently is the origin of the phrase “keep it under your hat”.

Willy gave us a very interesting evening and it was very informative. His anecdotes about his film work were good to hear. I think it is good to see different aspects and use of wood not just for woodturning.

These websites may be of interest: Thanks to John Woods for these.

[www.bowyers.com](http://www.bowyers.com)

[www.fletchers.org.uk](http://www.fletchers.org.uk)

[www.vintageprojects.com/archery/bow-plans.html](http://www.vintageprojects.com/archery/bow-plans.html)

[www.poorfolkbows.com](http://www.poorfolkbows.com)