

To use or not to use a Minoan Chisel?

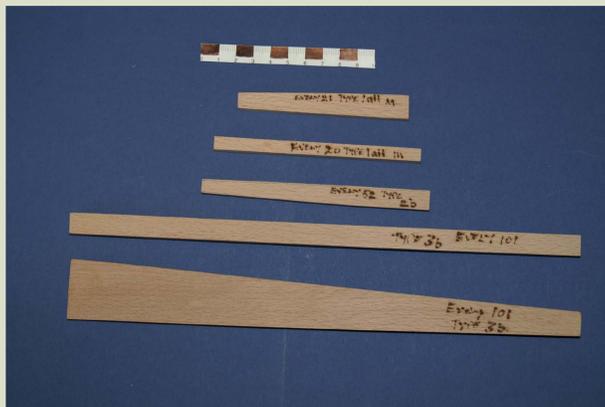
Ancient technology in a new light

The Minoan chisel is thought to have been used on stone, wood, metal and bone. However, previous research has mainly been concerned with typologies and no further investigations have been conducted in order to try and substantiate the assumptions of use and users. If the chisels were used on stone, wood, metal and bone, would it not be possible to exclude certain types of chisels for certain use? That is, would

all the chisels be suitable for working on all of these different materials? Furthermore, would the use-wear on the chisels be the same if used on, for example, stone and bone? My aim is to further explore and complement the previous theories on use and users of the Minoan chisels with experiments on different materials and visual examinations of the Minoan chisels.

So far, two experiments using the chisels have been conducted on stone. In the first experiment, Nigel Ratcliffe-Springall, a sculptor active in Kritsa (Crete), carved a mould in Cretan limestone with matrices for a chisel and a trunnion axe. In a second experiment a relief in Maltesian limestone was carved by Petros Georgopoulos, a marble sculptor, and member of The Acropolis Restoration Service, Athens.

The different types of chisels according to Doniert Evely (Minoan crafts: tools and techniques. An introduction, Göteborg 1993). To the right, the patterns used for casting and to the far right the cast chisels. The chisels were cast at Forsviks Bruk, Sweden, using the flask technique (sand casting). The cutting edges have been sharpened with pumice and sandstone, an attempt to come as close to the Bronze Age way of manufacturing as possible.



To the right: the equipment used for the mould experiment, Cretan limestone, chisels, a wooden mallet and a stone.

To the left: one interesting result, when carving the mould, was that different marks were created by the chisel depending on if a wooden mallet (the marks on the left matrix) or a stone was used as a hammer (the marks on the right matrix).

To the right: the mould with matrices for a chisel and a trunnion axe.



For the relief experiment four chisel types were selected and used. The broader chisels were preferred for leveling the stone and the smaller chisels were used for the details.

To the far left: Petros carving the contours of the female face.

Further research: experiments with chisels on metal, wood and stone.

