

Early Places With Metals:

Can Hasan

Advanced

Can Hasan is important for us because a **mace head** and thus a relatively large copper artifact has been found there. So what can we find out about Can Hasan and that mace head?

Well - very little by googling in the Net. There is hardly anything in the Internet about Can Hasan, the big exception being the always good and reliable "armchair" prehistory blog by **Edward Pegler**. If one wants to dig deeper, one needs some help to recover the many "preliminary reports" of the guy who dug it out (one **D. French**; in the sixties of the 20th century) or the highly illuminating paper of **Ünsal Yalçın** from the "Deutsches Bergbau-Museum (German Mining Museum) in Bochum, Germany.

Can Hasan is not far from Çatal Höyük. There are several Can Hasan's, the oldest one is the "aceramic" Can Hasan III. We are, however, interested in the later ones, about half a mile south-east of Can Hasan III. That's where the mace head (and some other Cu objects) were found around 1960.

Here is what Can Hasan looked like in the sixties; the picture shows house 3 in layer 2B where the mace head was found:



Can Hasan; House 3 in layer 2B

Source: D. H. French: "Excavations at Can Hasan", 2nd preliminary report, Anatolian Studies Vol. (1963)

The interesting layers of the "younger" Can Hasan span the range from neolithic ("stone age") to chalcolithic ("copper age"), the mace head was found in a layer that dates to about 6 000 BC.

Here are pictures of that famous mace head:



Mace head (about 5 cm diameter)

Source: Ünsal Yalçın: Der Keulenkopf von Can Hasan", Metallurgica Antiqua, Der Anschnitt, Beiheft 6, 1996, p. 279 - 289. Color pictures courtesy of Ünsal Yalçın

Why is the mace head famous? Because it is not only about the largest copper object from way back, but was also supposed to have been cast! That would have had far-reaching consequences like "melting before smelting".

- The "*mace head was cast*" hypothesis goes back to D. French, who unearthed the piece. This diagnosis was accepted by many until recently. This is a bit astounding because just looking at the objects makes it rather obvious that it was most likely hammered into shape, witness the clearly visible seam.
- Ünsal Yalçın, examining the mace head in detail, including a metallurgical analysis of a small part, proved beyond doubt that the object was hammered into shape (with stone hammers) from a native copper piece of substantial size. The copper was never liquid but had been heated between hammerings. The copper itself is rather pure but with a density that is substantially lower than that of pure solid copper, indicating some porosity. The mace head does not show any trace of having been used. That could indicate that it wasn't so much a working weapon but a cult object or a status symbol like all those special swords made for showing off in the future.
- Discounting the Can Hasan mace head, *melted* and *smelted* copper now appear more or less simultaneously after about 5 500 BC. That makes a lot of sense as we shall see.

¹⁾ Ünsal Yalçın. " Der Keulenkopf von Can Hasan", Der Anschnitt, (1998) p 279 -289