

## Early Copper Sites

Links to **Early Places Without and With Metals**

Early Places <b>Without</b> Metals		
Place	Keywords	No. on <a href="#">map</a>
<a href="#">Hallan Çemi</a> Turkey	<b>(10 200 - 9 200) BC</b> Oldest known permanently settled village in Anatolia; 9000 BC or older Adornments; e.g. malachite, obsidian use.	4
<a href="#">Göbekli Tepe</a> Turkey	<b>(9 000 - 7 000) BC</b> Not a town but some ceremonial place of astonishing complexity.	2
<a href="#">Nevalı Çori</a> Turkey	<b>(10 000 - 8 000) BC</b> Town and ceremonial places. Many Figurines. Maybe copper?	6
<a href="#">Jericho</a> Palestine	Large neolithic settlement of the Natuflian culture	

Early Places <b>With</b> Metals (Cu)		
Place	Keywords	No. <a href="#">map</a>
<a href="#">Cayönü Tepesi</a> Turkey	<b>(9 500 - 6 500) BC</b> Early copper (> 100 small beads)	3
<a href="#">Asikli Höyük</a> Turkey	<b>8200 BC – 7400 BC</b> Early copper (ca. 100 small beads)	5
<a href="#">Çatal Höyük</a> Turkey	<b>7 100 BC - 6 200 BC</b> Earliest pottery Some copper beads, small parts	1
<a href="#">Can Hasan</a> Turkey	<b>Around 6 000</b> Large copper mace head	7
<a href="#">Rosh Horesha</a> Israel <a href="#">Shanidar Cave</a> Iraq	<b>11 000 BC</b> Metals claimed but <i>probably wrong</i> Adornments including malachite and possibly copper	

<a href="#">Yumuktepe</a>	<b>7 000 BC</b> First smelted copper around 5000 BC	8

### Early Places Without and With Metals

Logic dictates that somebody, sometime, and somewhere used a metal, most likely copper, *for the first time*. Unfortunately, he or she did not record that "first" for posterity. The ancient inventor probably did not consider his deed to be something very special, not to mention that writing hadn't been invented yet. All we have is therefore what trained archaeologists (or untrained treasure hunters) dug out of the ground somewhere. We must discard all objects not "scientifically" excavated in almost all cases because we just don't know exactly where they come from and how old they are.

- We also must treat objects excavated by early archaeologists with some care because these guys may not have properly recognized what they found. When Napoleon's "[archaeologists](#)" started digging and collecting stuff in Egypt, it wasn't clear to everybody that lead (Pb), [graphite](#) (C) or galena (PbS) were completely different things, and the lead - galena confusion survived to some extent [until modern times](#). Modern archaeometallurgy right now is cleaning up the mess left by hundreds of years of misunderstandings, wrong guesses or just plain mistakes made by well-meaning but not always knowledgeable archaeologists. It's not easy and in many cases definite answers cannot be given. One simply cannot determine the exact age of an old copper or bronze object. [C14 dating](#) won't work, and no other methods are known. For iron containing some carbon (i.e. for steel), C14 dating might work but it is not a simple task. Dating thus is always tied to where, *exactly*, the object was found; i.e. in which layer of a known stratification.

What I will do here is to look at some of the *oldest* presently known archaeological sites where metals have been found. In all but one case we deal with native copper, picked up "from the ground". In order to put the findings in context, we also need to look at comparable places where *no* metals have been found. One might ask why the metal-less ancient cultures did *not* pick up available native copper and gold and made something from it, considering that other cultures, not all that different, did just that a little later. One might argue that the stuff simply was not available in the immediate environment of the metal-less old towns, and that is certainly a good reason. However, even the very oldest organized cultures or societies covered in the links above did some long-distance trading, acquiring things that were not easy to find in their own stomping grounds, for example bright green copper ores like malachite, or sea shells. One might guess that *nobody* then used native metals.

All these places were centers of the "[Neolithic revolution](#)", the period when humans changed their life-style from being hunters and gatherers to settling down. Domesticating animals like pigs, sheep and goats started, and so did agriculture by cultivating and breeding crops like wheat, emmer or barley (for making [beer](#)). That triggered new developments in other areas, too. If you can't go out hunting with the boys anymore but have to stay at home most of the time, the most urgent business for the men is to keep the [females happy](#) (and busy). Colorful [jewelry](#) thus predates advanced technologies, like making pottery in kilns, or metallurgy. In fact, most of the very first metal objects found were copper beads used for jewelry.

- In the lists above I therefore start with some early places where *no* metals have been found. Notice that I don't say that no metals have been *used*. In some places just a few tiny copper pearls have been found - in a space that covers a large area and several hundred years. *Not* finding something does not necessarily mean it wasn't there under these circumstances.

Most of the early places I cover are in Anatolia and some of these places have been found just recently, causing major sensations and plenty of speculations. While I give you a lot of piecemeal information, the link provides for a very readable article "History of Mining and Metallurgy in Anatolia" that puts it all together.

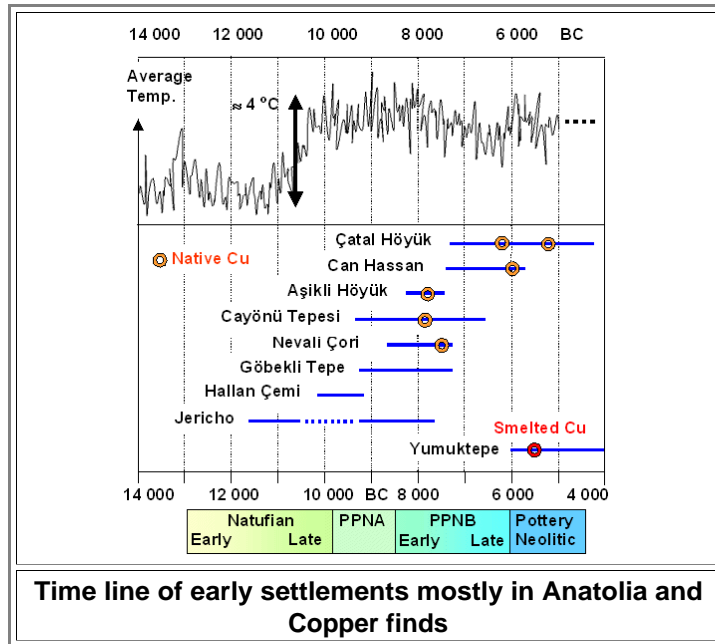
The authors are well-known archaeometallurgists who we have met several times already: **Ünsal Yalçın** and **Hadi Özbal**. The article can be found in the Net without a quotation; I hope the authors forgive me for including it here.

[Good Reading](#)

**History Metals Anatolia**

The following graph gives a **time line** on the towns covered in the links. Note that the dating (typically "[C14 technology](#)") is uncertain to some extent; every source seems to give slightly different times. If in doubt, I picked a kind of average.

I have also included a rough draft of the average temperature during the time slot involved; it is based on the results from the ice-core drilling in Greenland (a complete and correct curve is given in [this link](#)). The average temperature in Anatolia is certainly not well represented in this graph, but the general trend should be right. The rise in the average temperature around 13 000 BC is the reason for the **neolithic revolution**, i.e. the transition from (migrating) hunters and gatherers to sedentary farmers and animal keepers.



Finally, here is a map of Turkey with the locations of these places. A related map showing the "fertile crescent" is [here](#).

