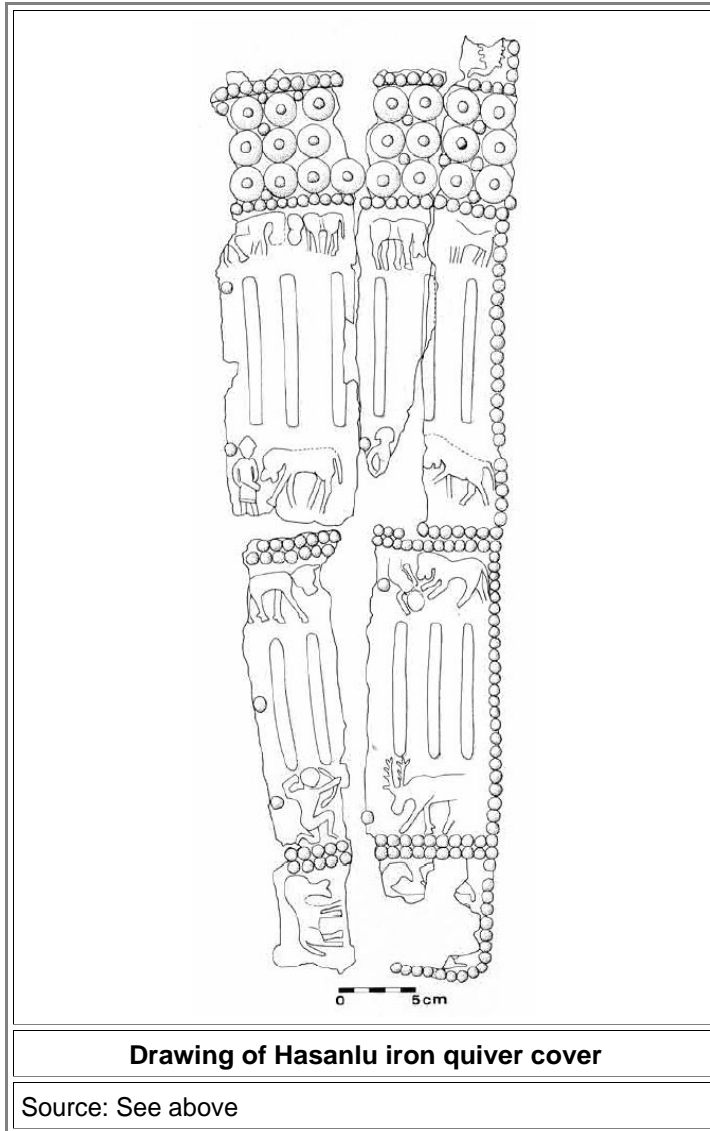


## Quiver Cover

When I started these "Early Swords" modules, i was considering swords and only swords as embodiments of complex high-end objects of early iron and steel technology. Then I read [Vincent Pigotts paper](#) "**The emergence of iron use at Hasanlu**" and learned about a complex decorated *iron* quiver. Here it is:



The paper states: "The iron panels on this quiver from Hasanlu IVB were decorated by cold working to form raised figures of people and animals. Easily recognizable near the bottom is the figure of an archer shooting a stag. The round bosses and studs are of bronze."

[Hasanlu](#) iron is typically heavily corroded and I could not find an actual picture of the quiver.

We have a sheet of iron, about (20 x 60) cm<sup>2</sup> in size and - I'm guessing - 0,1 cm - 0,2 cm thick. A fine pattern is "cold-worked" into the metal. What does it take to do this? Quite a lot, to be sure. Here is my list:

The cover has a volume of of 120 cm<sup>3</sup> - 200 cm<sup>3</sup> like a cube with a length of about 5 cm to 6 cm. Since the smith needs some more iron to hold the part, and some of the iron is lost during forging, the smith needs to start with a lump of iron with a volume equal to that of a cube with a side dimension of 7 cm to 8 cm. That corresponds - once more I'm guessing a bit - to about a third of a typical bi-pyramidal iron bar as [found in Khorsabad](#). That is a substantial amount of the still precious stuff.

More important: The smith needs a piece of iron that does neither contain large slag inclusions like the (roughly contemporary) Luristan sword shown [here](#), nor substantial inhomogeneities with regard to carbon, i.e. spurious hypereutectoid areas.

Why is that? Because you just can't produce a sheet metal plate without parts looking ugly or contain holes, and you cannot emboss a fine pattern, if parts of your sheet is brittle.

- Typical bi-pyramidal iron bar as found in Khorsabad are a 120 years or so younger than the quiver cover and thus, presumably, of better or at least similar quality than the stuff our smith used. The problem then is clear: The quality of the starting material at the disposal of the smith did certainly not meet the demands made above.

It follows that the smith must have had a few tricks up his sleeve:

- He most likely could recognize various grades / qualities of the iron offered to him and was able to select suitable pieces.
  - He might have used [faggotting](#) to homogenize the iron.
  - It then goes without saying that he could make good quality fire welds, and
  - He might have had some ways to purify his iron by squeezing out slag residue. This might have happened during faggotting.
- On other words: The smith knew all the tricks discussed at some length in the context of the Luristan mask swords.

## Assyrian Type Swords Found in Hasanlu

We know that the Assyrians had [plenty of iron](#) around 700 BC and thus very likely plenty of iron swords. However, we have no findings, only reliefs like the one right below, showing the [sword of Sargon II](#). More pictures [here](#). Note that it has a particular kind of hilt. Well, in Hasanlu swords were found that come close:



**Sword of Artgon II**

Source: North palace Ninivah; 645 BC; Internet

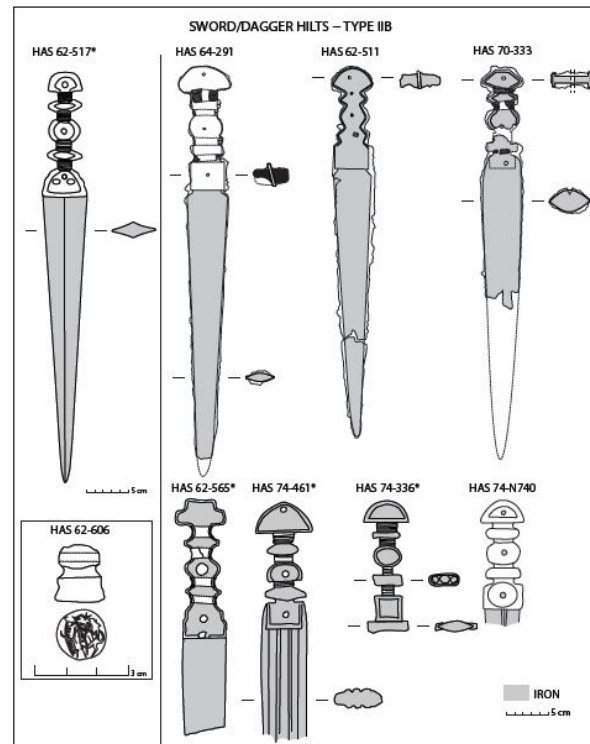
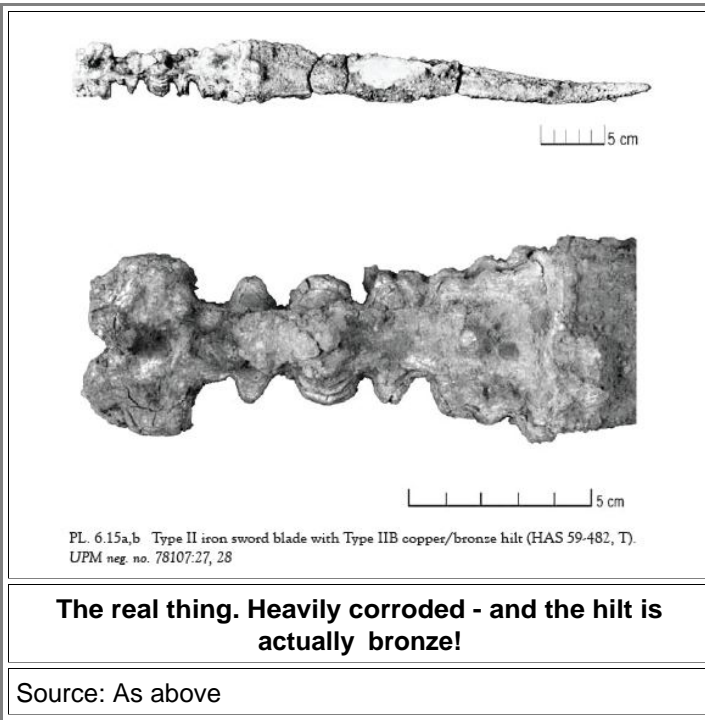


FIG. 6.29 Sword/dagger Type IIB hilts appear to be made of separate pieces of metal but are actually a single core piece wrapped with metal wires and bands that separate the different compartments. The stamp seal (HAS 62-606, T) was associated with HAS 62-517 (T). Kimberly Leaman Insua (\*drawing taken from Object Cards, field notes, and photographs)

**Drawing of Hasanlu swords**

Source: Christopher P. Thornton and Vincent C. Pigott  
(2012) [Blade-type Weaponry of Hasanlu Period IV](#),



- Interesting. But you must realize that Hsasanlu findings predate Sargon II (and all the other guys on the many reliefs) by around 100 years. So your guess about the significance of these swords is as good as mine. We still need to find some well-preserved Assyrian swords in order to assess the technology behind them.