

Nebra Sky Disc Aunjetitz Culture



Bronze Age cultures in Germany until some years ago were believed to be unconnected small and rather unimportant rural farming communities with a low level of cultural sophistication.

This changed overnight with an intriguing clandestine hoard discovery and an undercover operation to seize the illegally removed goods.

Still today many hobby treasure hunters roam German landscapes with metal detectors for precious metal finds and from time to time they get really lucky.

But this discovery they tumbled on in July 1999 was a true sensation. Unfortunately they did not inform the responsible authorities and tried to sell their valuable booty in the black antique market.



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But the unearthed Bronze Age antiquities were too spectacular to go unnoticed.

The illegally excavated items included next to the now famous Nebra Sky Disc two intact bronze swords, two hatchets, plus a chisel and various spiral bracelets. Fortunately the treasure hunters and their sellers were caught three years later with the unique antiquities.

Their most precious find a detailed sky disc was made of copper with gold inlays representing a night sky with moon and star constellations. After in-depth research twenty years later we know a bit more but still not all about this unique Nebra Sky Disc as it was called after its place of discovery at Nebra in Saxony-Anhalt.

Sophisticated Chieftom

But still little is known yet about this early Bronze Age chieftom with in-depth metallurgical and cosmological knowhow in Middle Europe north of the Alps. A region which lacked so far any proof of advanced cultures able to create such a skillfully crafted sky disc with sophisticated astronomical detail. The consignment of

surprising items found indicate that an advanced early culture developed about 4200 years ago with a dominant cultural growth period lasting for over 400 years. The reasons of its existence were the fertile soils necessary for farming and feeding a growing number of people in this chieftom. In addition there was salt available and important trade routes passed through its area.

Early Long Distance Trade

There is further proof of long distance trade existing with Egypt and Mesopotamia as well as going north to England. New research in Scandinavia looked at over two hundred Bronze Age items found there like bronze axes. The metal analysis shows that the used materials like copper, tin and zinc came from the British Isles, Germany and Austria.



Experts looked at the period from 2200 until 1200 BC and came to the conclusion that a well-established trading zone existed in Middle Europe. And most importantly the Aunjetitz Culture was a central transshipment point or better said

one of the pivotal trading engines. The major barter commodities were metal from Austria and Slovakia against equally valuable amber from the Baltic. The latter was very thought after in the Middle East and Egypt. Unfortunately these well-established trading routes disappeared a thousand years later.

Aunjetitz - An Early State?

So we can deduce that a well-structured Aunjetitz influenced territory existed based on farming and important trading wealth. The fact that no fortifications were found might give reason to assume that a military defense force existed. Possibly it might only have been a strong civil defense system where every man turned warrior when needed.

But why did this chiefdom disappear overnight around 3600 years ago? Could the reason be the Thera volcano eruption in the Aegean Sea at the same time? Latest research results indicate that this eruption had a far more devastating result on regional climate around the globe on the northern hemisphere. Might that be the reason why a principally farming based economy collapsed?

Pre-History

But what level of cultural development we could expect at that time in rural Germany? Let me try to give you the big picture. Latest research results indicate that our ancestors were far more developed and skillful than we previously thought. Only a few hundred kilometers further north and a stunning 300,000 years earlier

man in this case *homo heidelbergensis* used a hunting spear. Now imagine these pre-historic spears barely differ from modern Olympic competition spears in length, weight and point of gravity. The major surprise was they had a similar flight path and could kill wild horses at a distance of over fifty meters.

The next archeological proof of developed humans in Europe in this case *homo sapiens* date around 40,000 years ago when they created rather realistic and highly skillful cave paintings at Chauvet in southern France and carved numerous animal figurines made of mammoth ivory including a rather large lion man statuette near Ulm in Germany.

Corded Ware & Bell Beaker Cultures

Getting closer to the time of our Nebra Chiefdom we know of the Corded Ware Culture dated around 2800 BC so-called after their way to decor their pottery ware widely spread in Germany. This culture was also known to engrave its deceased with gifts like stone axes.

Then there was the Bell Beaker Culture about 300 years later so-called after the typical form of their drinking vessels. These Neolithic people hunted with bow and arrow and possessed already metallurgic knowledge. So they were able to produce gold colored weapons by adding tin to bronze and they knew that tin made copper harder for weapon purposes.

Both these rural farming cultures were predecessors





of the more sophisticated Aunjetitz or Unetice Chieftom, as experts call it. It is interesting to note that Bell Beaker and Aunjetitz both erected long houses and buried their dead in wooden boxes or carved out tree trunks. With this new discovery Bronze Age history in Germany might need to be rewritten. Previously the huge forest covered area which is today's Germany was believed to be sparsely inhabited by unsophisticated small farming communities.

Nebra Sky Disc

What do we know about this intriguing discovery which since 2013 belongs to the UNESCO World Heritage? A lot of you might have already seen pictures of it. When I saw the first picture shortly after its recovery I assumed it was a small hand palm sized platelet. But when I saw it in reality at the museum in Halle its actual size surprised me.

Let me give you the basic facts: weight 2.5 kg, diameter 32 cm and thickness 4.5 mm. The disc is not perfectly round. And its thickness differs too from the center it reduced to 1.5 mm at its corner. The disc blank had only a diameter of 20 cm and then was

cold hammered to its final size of 32 centimeters.

Crucial Cult Object

Holding a copy in my hands at the museum made me aware how important this disc must have been in antiquity to its owners. And it really looks fascinating with its blue green patina and inlaid shiny gold sky symbols.

I tried to imagine what intriguing impression holding up such a significant cult object must have had on the surrounding community. Was it the key to power of this chieftom? Did it give its ruler an undisputed connection to their gods they believed in? Was it the proof of higher wisdom of a religious leader or powerful shaman based cult? Unfortunately we do not yet have all the answers to these vital questions.

Important Facts

What we do know so far? The Nebra Sky Disc is worldwide the oldest detailed sky image represented in a natural and most realistic way. This unique disc shows the synchronized sun year with the eleven day shorter moon year. Therefore it is the first precise lunisolar calendar which could be used over decades.

But why was the moon of such interest? In antiquity without the help of visual instruments it was easy for everybody to notice in the night sky the different moon phases. It was the basis of understanding time and creating an annual calendar with months and seasons. Therefore our ancestors

worshipped moon gods, the Romans Luna, the Greek Selene, the Egyptians Thot and the Germans Mani. Even the Chinese and Maya prayed to moon gods.

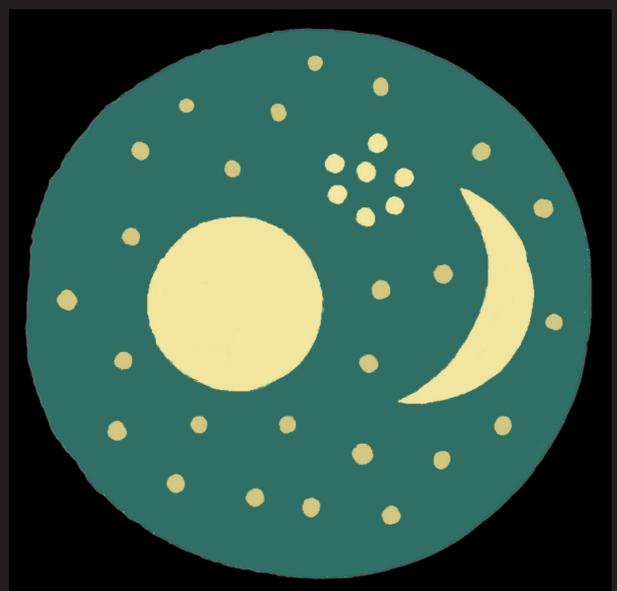
Source of Materials

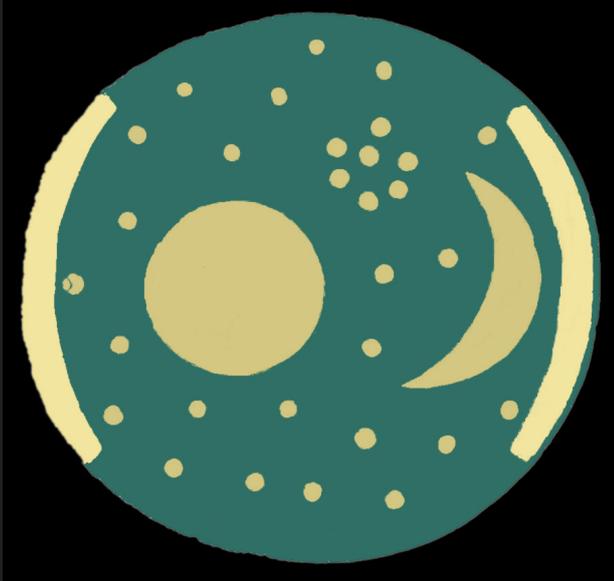
Another surprise is where the materials used to make the Nebra Sky Disc came from. The copper the plate is made of comes from Mitterberg near Salzburg in the Austrian Alps which is some 400 kilometers away. The gold with a high silver content and tin was sourced from Carnon River in Cornwall England in a distance of 1,100 kilometers. And the technique used to fix the gold inlays on copper plate came from Mycenae in the Aegean Sea.

This proves that very active long distance trade existed already 4000 years ago. And it might even suggest that German traders traveled all the way to Mesopotamia to bring home the astronomical knowledge. Or was it the other way round? That Middle Eastern traders passed through Germany in their way to the Baltic to source highly valued amber.

Disc Made In Phases

First the full and half-moon and





32 stars including the Pleiades star cluster with seven stars were inlaid on the sky disc. This star cluster disappears in March from the night sky and rises again in October. Representing at Nebra exactly 10 March and 17 October as seen precisely seen in the night sky here 3600 years ago. We can also consider that the 32 stars indicate the 32 days needed for the Pleiades to stand again by the moon.

Possibly the disc was a mechanism to coordinate the sun and moon calendar. So we have two messages how to bridge the 11 day difference between the moon and sun calendar. Remember the first written instruction to coordinate both calendars were found in a Babylonian cuneiform text 900 years later.

Second Phase

In a second step two arcs left and right with lunar crescent representing the important solstices of the rising and setting sun were added. The cross angle does not measure exactly 90 degrees but 82-83 degrees. Which proves that the arcs did not serve as decorative elements but represent the correct positions of summer and winter

solstices marking 21 June and 21 December.

The gold pieces inlaid are very thin with 0.4 mm and consist of three different material mixes. To fix gold inlays on the disc the artisans hammered carefully inclined minimal clefts into the bronze into which they inserted the super thin gold inlays and hammered them tight. From this work we can see slight differences in process which proves that different artisans concluded each phase. And we can assume that possibly each new ruler had specific wishes to change this most crucial ritual cult object in his possession.

Third Phase

Third a so-called sun barge from Egyptian myth history was now added. But the interpretation

being a sun barge is still not certain. Some experts believe it could also represent the Milky Way or even a rainbow. The sickle added at the bottom is more bent as the side solstice arc to fit well between the stars. Different to the arcs it also shows two deep grooves and its gold color is different too.

Forth Phase

The worst job was done towards the end of the disc's 600 years of ritual use when 39 holes around the disc edge were punctured without much care. It is presumed that the disc might have been fixed this way to a larger shield or pole and carried around or hold up in ceremonies. During the last phase the left arc went missing and finally the disc was buried for unknown reasons on Mittelberg near Nebra 3600 years ago. We only know that farming communities in the region underwent a cultural change for what ever reason.

Today the disc is exposed at the Halle Museum in restored form with the missing right gold arc added plus one star. Accidental damage by the treasure hunters with a pickle to the edge were not repaired same as their scratched on gold inlays.



Mittelberg Cult Site

So a vital question arises. Was Mittelberg a ritual cult site? Closer investigations after the treasure hunters disclosed their place of discovery show few structural remains. A ring wall with a diameter of 160 meters was found erected of earth and stones topped possibly with a palisade of wooden poles.



Archeologists estimate that the wall could have had a height of 1.5 meters and a width of three meters at its base. Over time the trench in front was filled up through erosion. This wall was built between 800 and 500 BC but rests of earlier walls could be dated to 1900 BC. So they believe ritual ceremonies took place here during the Aunjetitz period.

All five phases took place during a span of 200 years before 1600 BC. Interestingly it was discovered that the disc shows antique cleaning traces when it was polished with fine sand. It has to be mentioned that the exact details still are disputed by some experts, as the disc was recovered from hobby treasure hunters and therefore found outside of archeologically proven context. Expert doubts exist also because many scientific results still were not published twenty years after its recovery.

Additional Artefacts Found

What made the Nebra Sky Disc discovery at first so questionable were the additional artefacts buried with it. Two swords, two axes and a chisel plus various arm spirals all made of bronze were part of the hoard find. The swords had a special form with a mix of elements from southeast and north Europe dated around 1600 BC.

The axes were of the round edged type with an all-round borderline and were dated at the same time. This axe form was commonly found in the region along the rivers Elbe and Oder.

What is Missing

So far no bronze melting ovens, casting molds and metallurgical working tools such as hammers and anvils were found anywhere in the region. We know that

bronze manufacturing skills were wide spread in Middle Germany even far away from copper ore deposits. These skills included smelting at the right and constant fire temperature as well as casting into ceramic or stone molds and working out a fine surface.

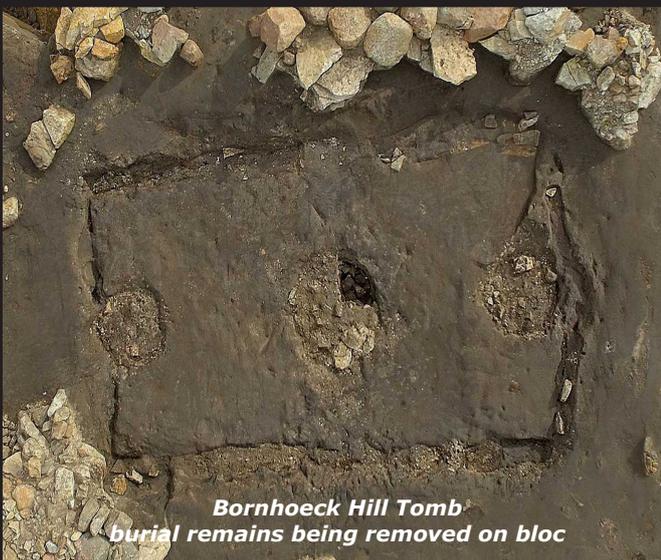
Hill Tombs

Another example giving proof of an important chiefdom are massive hill tombs in the region. And there were various found around the wider Aunjetitz territory. Archeological research results show that rulers at the time were laid to rest in identical full array with gold clothing needles, bracelets, upper arm spirals and arms such as daggers, chisels and axes made of stone or bronze.

An interesting question arises. For the vast generations of rulers too few hill tombs were found. Were they all robbed early on in the Middle Age and flattened to enlarge fertile farming land around hundred to two hundred years ago?

Bornhoeck Hill Tomb

It is situated near Rassnitz close to Dieskau and dated



*Bornhoeck Hill Tomb
burial remains being removed on bloc*



*Bornhoeck Hill Tomb base
being excavated*



1800 BC. Unfortunately it was robbed around 1200 and flattened by farmers after 1900. It was the largest hill tomb in Bronze Age Europe with 65 meters in diameter, and a height of up to 15 meters. The workers piled up 20,000 cubic meters of earth over the burial chamber. This made it seven times larger than the hill tombs at Leubingen and Helmsdorf.

To demonstrate its importance it was covered with white chalk and possibly decorated with red markings. This massive tomb could have served two rulers as final rest. Many grind stones were found here which could produce flour for a thousand person daily needs.

But today there is nothing left. In 2014 archeologists excavated the ground below the farming level. Little remains were left but experts could establish the basic structure of the burial chamber. The wooden burial chamber was over five meters long and three meters wide and nearly as high. Worked oak tree stems were erected tent like with a central beam supported by

three central poles.

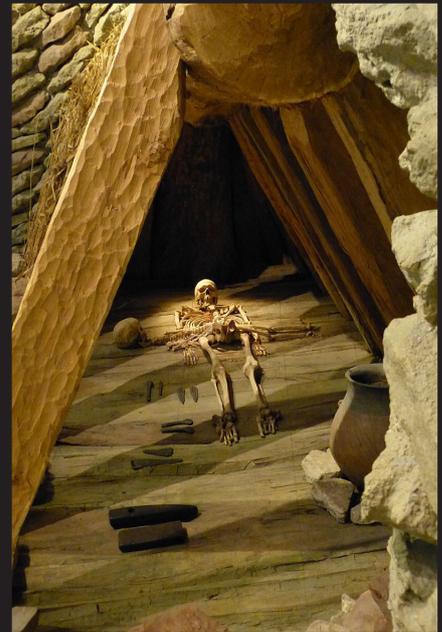
These were covered with massive stones forming an 18 meter circle. They were transported from a quarry over ten kilometers away to the site. For detailed research three blocks were cut out each weighing 25 tons and transported to the Halle Museum. So were are expecting further interesting results in future.

Leubingen Hill Tomb

This tomb near Soemmerda in Thuringia is older and dated 1942 BC. Possibly it is the burial place of an important regional leader and again it is assumed to have served for a double burial. With over 30 meters in diameter it has a circumvention of over 100 meters and a height of over 8 meters.

Its wooden chamber had a tent like structure made from oak tree stems. It is the first tomb in Bronze Age Germany where individuals were laid to rest so richly decorated. The found burial gifts include gold cloth needles, gold bracelets, gold hair jewelry, bronze axes, daggers and chisels.

When I visited this site in summer 2019 new excavations were under way covering an area of 70,000 square meters. It can be



expected that new discoveries will be made public soon. But first indications are that settlement traces were unearthed including ovens, pits for wooden house poles and refuse pits plus 60 burials. But the big surprise was a close by discovery of a 55 meter ring surrounded by a 250 by 330 meters trench. This might be an indication of a flattened hill tomb.

Leubingen "Palace"

In the vicinity and still in sight of the Leubingen hill tomb new excavations at Dermsdorf covered an area of 7,000 square meters and found an old settlement used between 2000 until 1700 BC. This included the largest long house in Middle Europe at the time. Was it possibly built for military purposes or for reunions? Or was it the "palace" of the great chief buried at the Leubingen hill tomb? With 44 meters in length and 10 meters wide in size it is for its time a massive building. The three ship structure on wooden poles is church like and therefore assumed to be used possibly as multi-purpose reunion building. Here experts found a huge ceramic pot with close to



