

Gold Hats



We have already reported on the legendary Nebra Sky Disk, which emerged about 4,000 years ago and depicts an accurate celestial image of the time with the sun and moon phases plus certain star constellations. Its age is surprising because, until now, we assumed that our ancestors in Germany lived in simple farming communities without such detailed astronomical knowledge. However, for their agricultural activities, they needed precise astronomical knowledge to determine sowing and harvest times.

Informative articles

Read also our articles on this website about the Poemmelte Cult Ring on the banks of the Elbe River south of Magdeburg and Europe's oldest sun observatory in Goseck near Weissenfels south of Leipzig, dating back 7,000 years. These three articles describe that the necessary knowledge was already present to produce finely decorated high cone shaped gold hats in the German Bronze Age cultural area 3,500 years ago.

Four unique hat discoveries

So far, four significant gold cone hats have been found. The first during agricultural work in 1835 on a field near Schifferstadt close to Ludwigshafen. Unfortunately, the second gold hat was not recognized as such in 1953 and was deliberately hacked apart by forestry workers to advance clearing work. This restored find is referred to as the Ezelsdorf-Buch gold hat.

The best-preserved gold hat was acquired by Neues Museum in Berlin in 1996 through the art market. Its origin and circumstances of discovery are unfortunately unknown, but it is believed to have been found in southern Germany or northern Switzerland.

The fourth gold cone hat was discovered in western France in Avanton near Poitiers. All four specimens suggest, at first glance, that they are culturally closely related due to their same age, shape, and especially the very similar design and nearly identical decorations.

Same time horizon

It is astonishing that, although they were found so far apart, all specimens fall into a narrow time period of a few hundred years. They were made in the late Bronze Age during the time of the so-called Urnfield Culture, which



was a precursor to the well-known Hallstatt Culture. The high similarity suggests close cultural connections, likely facilitated by an already flourishing long-distance trade with the transfer of astronomical knowledge and fine craftsmanship skills.

Definitely for cult use

Today, we know that special objects were created for ritual use and for cult purposes very early on. Just think of the burial rituals in Schöningen in Germany, where 300,000 years ago, Homo Heidelbergensis buried several eviscerated wild horse skeletons together with the spear that killed them. That was no coincidence. This was an important ritual. More on this can be found in the corresponding article on our website.

Other cult artefacts

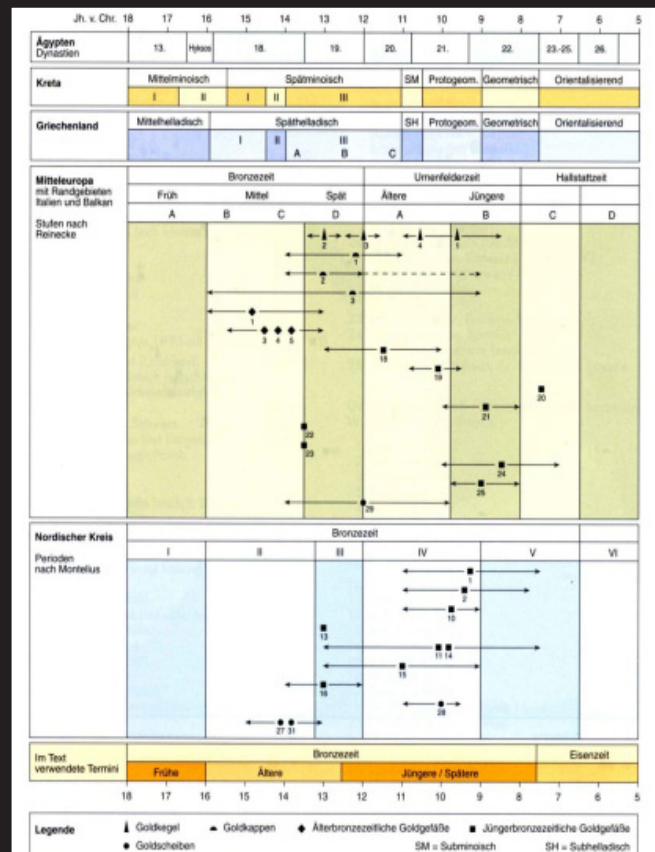
Another particularly interesting early cult object is the famous Nebra Sky Disk. Equally remarkable is the impressive Lion Man figurine carved from mammoth ivory. It was crafted over 30,000 years ago in one of the many caves on the Swabian Jura and is enormously large for its time, measuring over 30 centimetres. Of course, there is also an article on our website about this.

Object of worship?

Initially, it was assumed that the gold cone hats were probably placed on a pole and worshipped as cult objects. Today, we know that the tall hats made of rather thin gold sheets were lined with felt for stability inside and some also had a chin strap. Therefore, it is believed that they were worn as hats for special occasions. But who were their wearers, rulers, or priests? The recently suggested calendar function has been gaining importance for years, and therefore priests could have worn them during ceremonies for a solar cult during summer and winter solstice festivities.

Highly developed craftsmanship

It is surprising that these gold cone hats, with a height of up to ninety centimetres, were fashioned from a small piece of gold the size of a matchbox without seams, skillfully driven into their particularly high shape in one piece. The gold content is almost the same for all four specimens, at ninety percent. The remaining ten percent consists of



silver with minimal traces of copper and tin, making up less than one percent.

Paper thin gold sheets

The gold sheet is truly worked to be as thin as a sheet of paper. This fine workmanship was only possible through repeated so-called soft annealing at a temperature of 750 degrees centigrade. The craftsmen were already able to control the temperature perfectly by pure sentiment. They knew that at 960 degrees, the gold would have melted again.

They possessed excellent craftsmanship skills to produce these thin gold sheets with the finest decorations. For punching, they used a wax or resin coating inside to stabilize the delicately thin and tall cone hat shape and exert the necessary pressure for punching.

Schifferstadt gold hat

The Schifferstadt gold hat, like the Avanton gold hat in France, was found during fieldwork on agricultural land in 1835 and was thus the first find of its kind. Only ten years later, the very similar specimen was discovered in Avanton. The Schifferstadt gold hat is only thirty centimetres high and with 3,400 years, is likely the oldest. It weighs 350 grams and has a base diameter of eighteen centimetres at the bottom. Unfortunately, its brim is five centimetres wide and is damaged due to a missing part. The brim was reinforced by a copper wire, and the cone structure was reinforced with organic material such as felt.

Ezelsdorf-Buch discovery drama

This gold cone hat has a sad history. When it was found during forest clearing work in 1953 at the foot of Brentenberg near Neumark in Germany, workers tore the metal parts out of the ground and hacked them apart. When rain washed away the soil, it became clear that it was not worthless metal. A dentist was consulted, and after a melting test, it was confirmed that it was gold. The approximately 300 grams pieces were offered to the local museum for purchase. After a second restoration in 1976, the gold cone hat regained its original heights with ninety centimetres. Unfortunately, the brim is missing, but the bulging base or calotte for stability on the head is completely preserved.

Various rows of ornaments

In total, twenty-one different punch forms and six different punch ornaments for ring divisions



were counted. In this specimen, some punches have up to seven outer rings. Altogether, the gold cone hat consists of twenty horizontal ornament lines with punch rows all around. Particularly noteworthy is a decorative band with wheels with eight spokes which can be interpreted as well as eight-rayed sun symbols. The tip is adorned with a ten-rayed star, which most likely represents the sun.

Remarkable burial form

For three of the gold hats, the circumstances of the find could be reconstructed. They were probably ritually buried. The Ezelsdorf-Buch gold hat stood in a pit on a base of sand, and its tip reached ten centimetres below the surface. In the case of Schifferstadt, it was very similar. The gold hat was placed standing on a clay plate at a depth of sixty centimetres. The clay plate lay on a bed of sand. Archaeologists assume that the sand was a sign of ritual purity. Thus, its tip also protruded just below the surface.

Ritual burial of hats?

But at Schifferstadt, three bronze axes were buried alongside, similar to the Nebra Sky Disk. This gold hat was filled inside with soil and ash. It is assumed that this was also the case with the other gold hats. Clearly, this is an indication of a specific ritual.

But why were the gold cone hats all buried in the same way? Were they perhaps buried when their wearers died? And was their ash then filled into the hats? The religious understanding and burial customs of that time make this assumption plausible.

Berlin gold hat

It is the best-preserved gold hat, weighing 490 grams with a height of seventy-five centimetres. Its brim is flat and reinforced by a square bronze wire. This wonderful specimen was decorated with seventeen different punch stamps. The horizontal punch fields are separated by three different roller punch ornaments. The circular punches are



surrounded by up to six rings. The different number of punches and rings also result in calendar calculations. This will be explained more precisely. This hat also has unusual punch shapes, such as lying crescents and so-called eye punches. Its tip is adorned with an eight-rayed star sign. This is a clear solar symbol and strengthens the scientists' belief that the gold cone hats were used for solar cult rituals.

Avanton gold hat

It is the westernmost find and over 1,000 kilometres away from the other locations in present-day Germany. It was discovered very early in 1844 during fieldwork and thus only ten years after the Schifferstadt gold hat. It's finding location is in the settlement area of the Celtic Pictones site. Unfortunately, it was damaged, and its brim and possibly the typical calotte were missing. Or were they lost carelessly during the discovery and recovery? Nevertheless, it is fifty-six centimetres high and weighs 285 grams. Its age is estimated at 3,000 years, like the others.

Unfortunate damage

Thus, all four specimens are closely related in time. In its artistic nature, it most closely resembles the gold cone hat of Ezelsdorf-Buch. Also, a sun symbol was attached to its tip. There are no records of its discovery situation, but a ritual burial standing in the earth, like the others, is possible. Perhaps it was improperly pulled out, and it was not noticed that the calotte and brim broke off in the soil, as it is made of a very thin gold sheet.

Possible rituals

Initially, archaeologists believed that the gold cone hats were used for a special ritual like a solstice cult. Due to their pointed shape, it was assumed that the gold hats were placed on a pole. Today, we know that they were lined with organic material like felt and worn on the head.

Proof of rock engraving?

There is a rock engraving depicting human figures with pointed hats. However, this is by no means conclusive, as the representation is unfortunately too vague and allows for other interpretations, such as special hairstyles. We have also seen similar representations



in rock drawings in Africa, and although gold was available, there is no evidence of gold hats in Africa. Moreover, the craftsmanship at that time was never as highly developed as in the Middle East and later in Europe.

Calendar function?

Through many mathematical calculations of the number of punches and rings in each field of the tall hats with over twenty rows of symbol fields, it is assumed that the gold cone hats may represent calendars. This is an interesting and very justified question when looking at the graphics. These suggest a luni-solar moon and sun calendar with representations of time or longer time periods, similar to the famous Maya long calendar.

Menton Cycle?

Some scientists mention a reference here to the ancient calendar calculations of the Greek scholars Menton and Euktemon. However, this is questionable, as they were written 500 years later. But perhaps existing knowledge was documented, complemented, and explained here.

They documented nineteen solar years with 6940 days and 235 lunar months consisting of 125 months with thirty days and 110 months with twenty-nine days. Thus, both calendars are of the same length. A small difference of two days is explained by the synodic and solar month lengths.

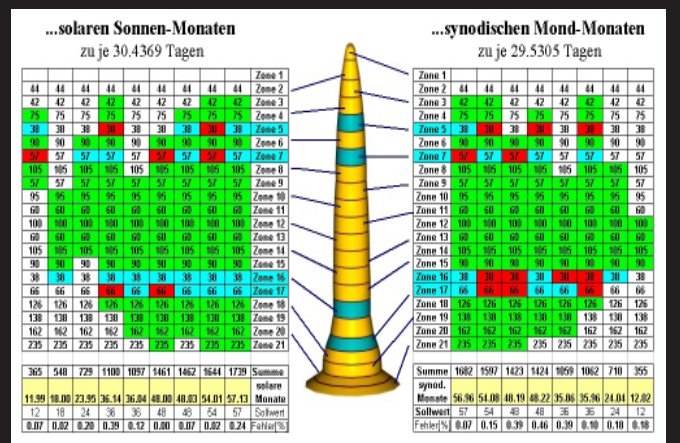
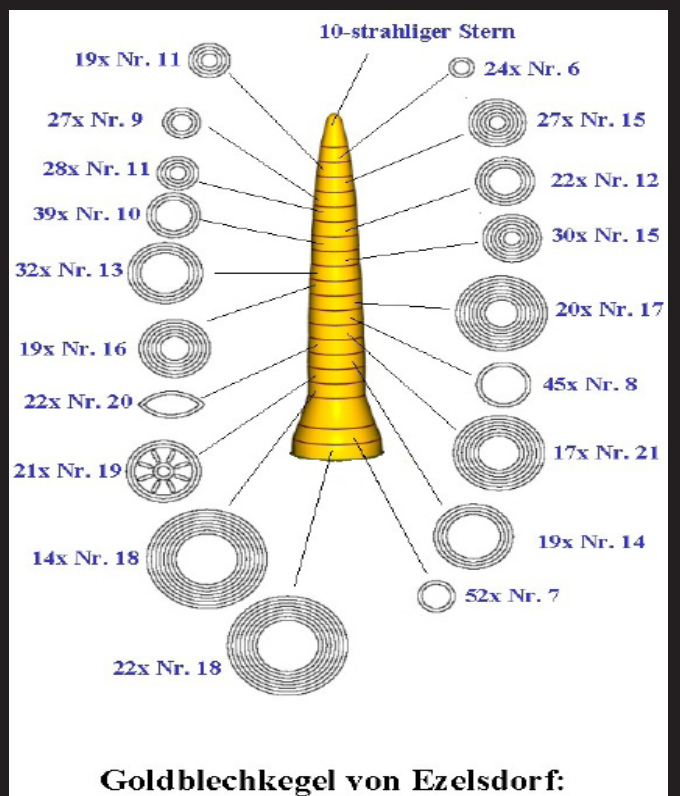
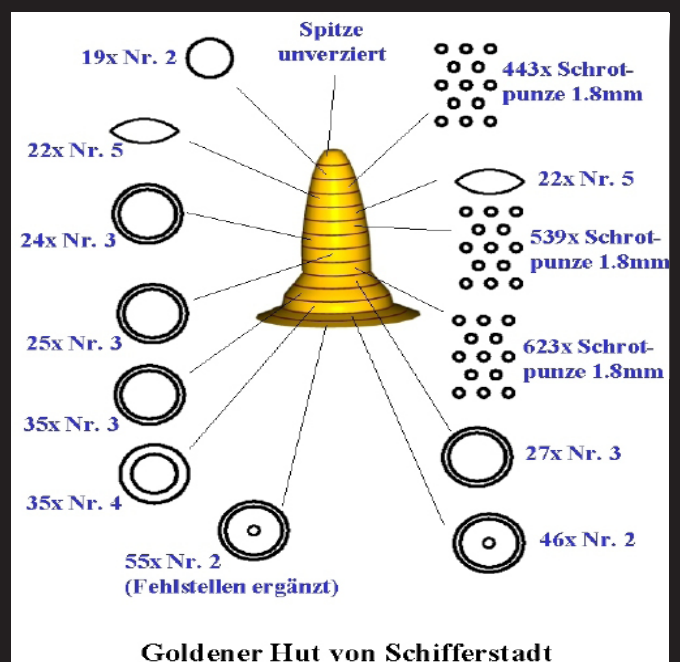
Lunar & solar calculations

Let's take a look at the punches and possible calculations. Not all punches have five rings; they vary from one to seven rings. For example: twenty punch symbols with five outer rings result in the sum of 100 by multiplying five by twenty. In the Greek calculations, this yields 12, 24, 36, 48, and 57 lunar months.

For the sun, it is 12, 18, 24, 36, 48, 54, and 57. For those interested, we recommend reading about the Menton Cycle on Wikipedia. For a better understanding of the calendar function, we recommend taking a look at the two informative graphics. The likelihood of a calendar representation has been growing in recent years through new studies.

Comparison with cave paintings

The first calendar representations in cave



paintings created about 30,000 years ago were only published in early 2023. See our article on this website. However, these calendar markings with lines and dots next to each animal species started in spring and ended in autumn, focusing on the different prey animals, when they became pregnant and offspring was expected. They were not full-year calendars and were based on a perfect observation and understanding of the life cycles of their crucial prey animals.

Calendars or ritual object?

In conclusion, the question arises: were the gold cone hats really used as calendars, or did they only document knowledge of calendar calculations and seasonal cycles and were used by their wearers, possibly druids, for specific sun rituals? The many related sun symbols suggest this.

Different sun symbols

We have identified four different sun symbols used in the early and late Bronze Age. The simple circle as a negative punch with or without outer rings, the circle with a central point, a circle with a cross, representing the four seasons, and the double sun cross as a circle with eight spokes. The latter is said to have a connection to the winter and summer solstices.

Many open questions

These include the special cone shape of the gold hats and the paper-thin gold sheet from which they were made. Both logically make no sense for headgear. They are really too thin and with their out of proportion height, simply too unstable and susceptible to damage in a rough Bronze Age environment. But in the ritual mindset of our ancestors, logic and practicality did not matter. Rituals set the tone.

Why so high?

Yes, they were special hats, and perhaps they were stored in a wooden box, as we know it from deity figures. Perhaps it started with helmets because the oldest gold hat from Schifferstadt was still quite wide and not so high. Perhaps the hats became higher because longer time periods were added on additional ornament rows upwards?

Another reason for the increasing height of the gold hats could be that the wearer in the



centre of a ceremony could be better seen by the many gathered participants. Everyone should see the important hat and be able to follow the ritual. This also explains the punch holes on the edge of the Nebra Sky Disk. Because it was attached to a pole and held high during rituals.

Why so thin?

But how can the choice of the paper-thin material be explained, which offers no stability at all? To hammer out a gold sheet nearly a meter high and in one piece, as thin as a sheet of paper, requires the greatest craftsmanship skill and detailed knowledge of the material. Gold was sufficiently available, so it cannot have been an economic reason.

It would have been easier to use thicker gold sheet for punching. What was the reason then? Did the requirements for craftsmen become increasingly demanding? Or did they want to demonstrate their extraordinary skills with it? Everything is possible.

Further gold discoveries

There are no high cone gold hats, rather caps with few decorative bands, and they were found on the Atlantic coast of northern Spain. The two specimens found at Axtroki in Spain's Basque province on the border with France are over 1,000 kilometres further west from French Avanton. Their age is estimated at 3,200 years.

The smaller gold cap is ten centimetres high with a base diameter of twenty centimetres. The larger one is only one centimetre higher and equally wider. They have very similar decorations to the gold cone hats, as can be seen in the photos. The smaller one differs by the large cross on the cap's top, which can also be considered a sun symbol.

Bowl or hat?

The comparison of decorations with the gold discoveries from Eberswalde north of Berlin is interesting. A found gold bowl could also have been a cap. Or does this bowl simply come from the same cultural circle?

Gold helmet of Leiro

This was discovered on the beach of Leiro in Galicia by a fisherman in 1976 while building a boathouse. The gold helmet was buried



in a clay vessel that unfortunately broke. This helmet is fifteen centimetres high, has a small pick point, and weighs 270 grams. This point is unique so far and has never been seen before. Perhaps further future discoveries will reveal this point as a regional peculiarity. Its diameter is the same as the caps from Axtroki, with twenty centimetres to fit well a human head. The find locations from Germany to Spain are over 3,000 kilometres apart. However, the decorations of the helmets look quite similar.

Imported knowledge

The Celts were not a cohesive tribe. They consisted of a mix of many different tribes and were called so by today's scientists, as their craftsmanship came from a common cultural area and was very similar. This common culture is quite possible because 5,000 years ago, there was already a highly flourishing long-distance trade.

Important cultural exchange

Along with its activities migrated an intensive cultural exchange and various craftsmen. At that time, amber was transported from the Baltic Sea to ancient Egypt for the pharaohs. For them, amber was a sacred stone. They called it the burning stone, and thus, it was dedicated to the gods.

Summary

For us, the gold cone hats and helmets are further evidence of the high level of development and knowledge of our ancestors during the Bronze Age, which was unfortunately almost completely lost in the Middle Ages. Therefore, we marvel at it even more today.

We see the gold hats as calendar documents in cultural context with the Nebra Sky Disk, the oldest solar observatory at Goseck, and the largest cult circle installation at Poemmelte. Active long-distance trade easily connected these with early astronomical knowledge in the Middle East.

Translation Note

Translated from german original text by using OpenAI.

Picture Credits

We thank the museums, institutions and photographers for making available some of their pictures and graphs.

