

The Vogelherd Cave and the discovery of the earliest art – history, critics and new questions

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Introduction

The region of the eastern Swabian Jura is particularly known for the earliest evidence of figurative art in the Aurignacian around 43 to 35,000 years ago (Conard and Bolus, 2003, 21; Conard and Bolus, 2008; Higham et al., 2012; Kind, 2014, this volume; Wolf, 2014, this volume). This paper will focus especially on four caves: the Geissenklösterle and the Hohle Fels Cave in the Ach Valley, and the Hohlenstein-Stadel and the Vogelherd Cave in the Lone Valley (see Conard, 2014, Figure 1, this volume). All four sites have yielded figurative art, usually in the form of animal figurines, but also representations of humans and hybrids are known. First excavated by Gustav Riek in 1931 in the Vogelherd Cave and published in 1934 (Riek, 1934), the Swabian Aurignacian figurines are mentioned in every summary of European Palaeolithic art. That these pieces represent the world's oldest figurative art so far was not always accepted in the scientific community. The aesthetic quality and elaborate work of the figurines were often seen as arguments against their provenance from the Aurignacian (for example, Zotz, 1951; Freund, 1957) or it is argued that there must have been older precursors (for instance, Bosinski, 1987; Bosinski, 2013). Even if the latter cannot be excluded, the dating to the Aurignacian is proved (for example, Conard and Bolus, 2008). Since their discovery, the figures from the Swabian Jura have always been the subject of art historical reflections. Despite their fine processing and their charisma, they remain enigmatic. Especially enigmatic to us are the numerous engraved marks – points, parallel lines, crosses and cross-lines – which are found on almost all the figurines and also on numerous organic tools of the same time period. We face many interesting questions concerning these marks: which signs are present on which figurines? Which marks or combinations of marks are typical of the particular sites? Were they placed simultaneously or with a time interval? Is it possible to establish a kind of 'signature' on the marks? What significance did the marks have in the Aurignacian social system in the Swabian Jura? In this article an overview of Swabian Aurignacian research history will be given, with special attention to Vogelherd and the other find spots that have delivered figurative art from this period. A summary of the main responses to these findings and a contextualization of their cultural significance follow. A new research approach that focuses on the sign system of the Swabian Aurignacian will be presented at this point.

The discovery of the cave and excavation at Vogelherd

It was 23 May 1931 when Hermann Mohn, an interested amateur researcher from Heidenheim, found flint artefacts in the backdirt of a badger den on a hill near Stetten by Niederstotzingen. Mohn had discovered the site Heidenschmiede in Heidenheim in 1930 and participated in the excavations there and could therefore determine the archaeological material safely (Huber, 2010). Soon after the discovery, he informed the members of the University of Tübingen about the discovery of another potential Palaeolithic cave, which was named 'Mohnloch' – 'Mohn's hole' firstly (Figure 1), and became later known as Vogelherd Cave. A short time later, the junior researcher and later Professor Gustav Riek was sent to Stetten to inspect the site. In the company of Mohn he went to the approximately 30 cm high and 40 cm wide entrance to the badger den on 4 July 1931. As early as the 5 July Riek opened the first test trench. On the evening of the second day they found evidence for a Palaeolithic settlement. Subsequently, a large systematic excavation was undertaken and in the course of just three months, the cave was excavated completely. As a reason for the high speed of excavation Riek called the fear of illegal excavations.

Die Fundmasse unserer Fundstätte ist daher nicht der so beklagenswerten Zerreiung, wie sie in frheren Jahrzehnten anderen Diluvialstationen der Alb schon zuteil geworden ist, anheimgefallen und die wissenschaftlichen Beobachtungen konnten seit dem Aufdeckungstage lckenlos aneinander gereiht werden¹ (Riek, 1934, VIII).

1 'The mass of finds from our archaeological site is not in such regrettable disruption as other diluvial stations of the Jura have become in previous decades, and the scientific observations have been arranged in order from the first day on without gaps'.

The excavations began on the 15 July 1931 and were completed the 1 October of the same year. Riek, who was constantly on the site, led the diary, measured the finds, made profile drawings and photographed during the excavation. Four local fieldworkers, A. Bamberger, H. Feiertag, K. Gring and E. Bamberger were employed for the excavation (see Bolus, 2014, Figure 3, this volume). Riek had planned a three-volume publication, of which only the first volume, 'Kulturen', was published in 1934 (Riek, 1934). Therein, Riek presents a detailed description of the geological processes, the petrography of the sediments and the traces of Palaeolithic settlement of this site. He published a cave plan with the expansion of the various layers (Riek, 1934, 11) and five profile drawings (Riek, 1934, 41-49). According to the cave plan twelve profiles were drawn. All of them are described individually, but not all are published as a drawing.

New excavations at Vogelherd

During the 1931 excavation the backdirt from the Vogelherd Cave was driven out by workers in wheelbarrows and poured down the slope in front of the cave. The fresh debris mound is clearly visible in old photos (Figure 2). This debris mound also attracted many amateur collectors, so that further discoveries were made after 1931, such as two fragments of a little lion head made of mammoth ivory and a possible figurative representation of sandstone, which is difficult to determine (Riek, 1954; Hahn, 1986). The first official excavation in the backdirt after 1931 was conducted by Eberhard Wagner in 1978. Two small test trenches in front of the two cave entrances were undertaken, but no significant results were obtained (Wagner, 1978). Seventy-four years after the first excavation, a team from Tübingen University under the direction of Prof. Nicholas J. Conard began a systematic investigation of the backdirt. The aim was to save objects that must have been overlooked during Riek's relatively fast excavation (Conard, 2007, 324-325). The excavation ran from 2005 to 2012 and supplied numerous finds, including new figurines, fragments of figurines, as well as stone artefacts, faunal remains and an important number of personal ornaments (Conard and Malina, 2006; Conard et al., 2007; Conard and Malina, 2008; Conard et al., 2009; Conard and Zeidi Kulehparcheh, 2011; Conard et al., 2010; Conard et al., 2013; Conard and Malina, 2012; Wolf, 2013; Conard, 2014, this volume; Wolf, 2014, this volume).

The significance of Vogelherd Cave for the Swabian prehistory

The Vogelherd Cave is one of the most important prehistoric sites in Germany. It is located on a limestone offset in the middle of the Lone Valley, about 20 m above the valley bottom. It possesses a surface of approximately 170 m² and a ceiling height of about 3-4 m. The Y-shaped cave has three openings: the south entrance, the southwest entrance and a small opening in the north, which is too small to serve as an entrance. Riek distinguished a total of eight Palaeolithic layers. Four of these are Middle Palaeolithic deposits and four belong to the Upper Palaeolithic. Two of the latter, layer V and VI belong to the Aurignacian (Riek's 'middle' and 'upper' Aurignacian). The two Aurignacian layers are the richest of the site and form the cultural level for which Vogelherd is famous. The Magdalenian is also represented in two layers. The Gravettian is not present, as in almost all the cave sites of Lone Valley. Remains from the Neolithic are the last traces of human activity at Vogelherd.



Figure 1. Hermann Mohn, his wife, Frieda Mohn, and Gustav Riek (left to right) at the excavation of Vogelherd Cave in 1931 (with kind permission of Ulrich Huber).



Figure 2. Backdirt in front of the Vogelherd Cave during the 1931 excavation (© Universität Tübingen).

The Middle Palaeolithic

The Middle Palaeolithic at Vogelherd is documented in four layers (VI-IX) and provides one of the most complete stratigraphic sequences for West Germany, with the receipt of Early Mousterian, Mousterian and Late Mousterian (Müller-Beck, 1983, 250-251). The oldest layer IX lies directly on the bedrock and delivered only six stone artefacts. One find makes this layer especially interesting: the molar of a young forest elephant documents the settlement of Vogelherd by the Neanderthals already in the penultimate interglacial period, the Eemian, at least 115,000 years ago (Lehmann, 1954; Niven, 2006, 10, 77). Joachim Hahn, due to erosion processes, does not rule out a younger, Würm glacial age of these finds (Hahn et al., 1985, 86-87). Whether from the Eemian or from the beginning of the last glacial period, these find are the oldest evidence for Neanderthals in this region.

The Upper Palaeolithic

Above a sterile layer, on top of the Middle Palaeolithic, two Aurignacian layers (V and IV) follow. Both yield the largest amount of finds from Vogelherd, for example, a very rich lithic assemblage with 910 tools and 1,223 blanks from 1931 (Hahn, 1977, 87), plus numerous finds from the excavations of 2005 to 2012. This extensive inventory is currently being edited and re-examined in an ongoing dissertation (Chang, 2014, this volume; Chang, in prep.). The osseous industry is also very abundant. Especially the split base points are frequently found. Exceedingly rich are also the personal ornaments that were added, due to careful water screening and sorting, in the 2005-2012 excavations (Dotzel, 2011; Wolf, 2012; Wolf, 2014, this volume). Some find concentrations show an organized use of the cave with designated work areas. The Aurignacian settlement traces were extremely rich, according to Riek's descriptions. Thus, several fireplaces and find concentrations in the form of raw material, tool depots and work waste are reported in the two layers or even an accumulation of mammoth bones that was found nearby the southwest entrance (Riek, 1934, 52-55; Hahn, 1986, 18-22). This bone accumulation is one of the oldest of its kind so far (Niven, 2006, 221; Wolf, 2012, 182). A pyrite (FeS₂), with clear traces of shock was recovered in the lower Aurignacian layer V within a burning place in the main hall (Riek, 1934, 161). It represents the earliest archaeological evidence of fire production with shock technology (Weiner and Floss, 2009). Riek described two skulls in the lower Aurignacian V, which were regarded for a long time as the earliest fossil evidence for anatomically modern humans in central Europe. They have recently been dated and show a Neolithic age of about 3,900-5,000 BP now (Conard et al., 2004).

Two layers of the Magdalenian (III and II) are also present at the Vogelherd cave. There were several tool accumulations and worked reindeer antlers. The Magdalenian settlement of Vogelherd takes place in the early phase after the Last Glacial Maximum. The low find density suggests that they were rather short-time stays (Riek, 1934; Niven, 2006, 232).

The figurines

Riek's excavation yielded eleven figurative representations. The lower Aurignacian layer V supplied a total of seven, including the famous horse, the mammoth with the perforations between the legs, the rear part of a large mammoth figure and the front leg with neck area, which is likely to be the same figure, the animal figure with the striking surface structure but without a head, the sculptured lion figure and the animal figure to which a head fragment from the new excavations in 2012 was refitted (Conard et al., 2013). Four figurines come from the upper layer IV: the lion in relief, the steppe bison, the relief of a mammoth and an anthropomorphic figure. Although the layer of each figurine is known, in his publication unfortunately Riek gives no indication of the exact position of the finds and their context. Riek's personal communication to Eberhard Wagner was that all the pieces were found in the central hall, right at the mouth of the eastern corridor, visible from the entrance at the right cave wall (Wagner, 1981, 42-43). Wagner reconstructs the position seen from the south entrance. Hahn, however, reconstructs the position at the opposite spot at the right wall, seen from the south-western entrance. He refers to Wolfgang Taute who received this information from Riek himself (Hahn, 1986, 20). This position is also confirmed by an oral notification by Erwin Pregel to the author. Pregel knew one of the workers of 1931, Anton Bamberger, who indicated the same position for the figurines.

After Riek's excavations, three further pieces of figurative art have been discovered. On the one hand, there are two fragments of a lion head, which probably originate from one and the same figure, but unfortunately cannot be joined, since the middle lamella of ivory is missing (Wagner, 1981; Hahn, 1986). One of them was found by S. Weber in the dump area in front of the south-west entrance and is, to this day, in private possession (Riek, 1954; Hahn, 1986, 104-106). The other one, the more complete part of the head, derives from the inheritance of E. Scheer and is now in the State Museum of Württemberg (Mauser, 1973). On the other hand, a perforated piece in sandstone was found by K. Bleich. Riek suggests this figure as a mammoth (Riek, 1954) and Hahn remains in the naming of this piece as a pendant, due to the lack of clarity of this presentation (Hahn, 1986, 98-104).

History of reception of the figurines

With regard to the impressive examples of Palaeolithic art from France, Riek was particularly keen on having found works of art from this period in Germany. Riek sets the stratigraphic position of the figures from Vogelherd clearly to the two Aurignacian layers V and IV. He places his Aurignacian sequence in the cultural division according to Henri Breuil (Breuil, 1907) and sees clear parallels to it. Riek's 'unteres Aurignacien' corresponds to the 'Aurignacien inférieur' and is no longer addressed as Aurignacian. Hansjürgen Müller-Beck (1957, 26) and Gerhard Bosinski (1967, 150) assign this layer to the Middle Palaeolithic based on the stone artefacts. Riek's 'mittleres' and 'oberes Aurignacien' correspond to the 'Aurignacien moyen' and 'supérieur' after Breuil and cover the part of the Upper Palaeolithic, which nowadays is referred to as Aurignacian (Riek, 1934, 262-264; summarized: Hahn, 1986, 23-25).

Riek's cultural assignment of layers IV and V to the Aurignacian on the basis of the lithic and the organic industry was generally accepted, but there were doubts as to the allocation of the figures in this period. As Zotz emphasizes:

Einige Speerspitzen mit gespaltener Basis und andere, zum Teil durchlochte oder randlich mit Kerbreihen verzierte Gegenstände aus Knochen und Elfenbein passen durchaus an die Seite dieses offensichtlich unserer Stufe I nahestehenden Aurignacien. ... Aber wie steht es mit den Tierskulpturen, die mit zu den besten Werken der paläolithischen Kleinkunst Europas zählen? Dürfen wir bereits in so früher Zeit, im mitteleuropäischen Aurignacien I, im ersten Interstadial, so reife Kunstwerke erwarten?² (Zotz, 1951, 197).

He explains this phenomenon with an unidentified region of origin in Western Europe, in keeping with the then generally accepted Franco-centric view:

Da ihnen [den Figuren vom Vogelherd] vergleichbare Erzeugnisse sonst nirgendwo in Mitteleuropa in so früher Zeit nachgewiesen wurden, es ein eigentliches Spätaurignacien [Gravettien] aber am Vogelherd offenbar gar nicht gibt, kann man nur schließen, diese Kunst wäre vom Westen während des Interstadials bereits bis in die Schwäbische Alb vorgestoßen gewesen, um – eine merkwürdige, aber vorläufig nicht lösbar erscheinende Diskrepanz – dann erst in Würm III mit ganz ähnlichen Werken Mähren erreicht zu haben. Bei der weit über das notwendige hinausgehenden Breite der Vogelherdmonographie, wo viel unbedeutendere Funde genau nach ihrer örtlichen Lage innerhalb der Schicht fixiert werden, muß jedenfalls auffallen, daß über die Fundumstände der so bedeutenden Skulpturen nichts verlautbart wird³ (Zotz, 1951, 203).

He clearly sees the figures from Vogelherd Cave as the precursors of the art in Moravia. The temporal gap appears strange to him, but seems irresolvable at this point. His doubts are reinforced by the fact that Riek indicates no exact find location for the figurines.

Gisela Freund follows the same argument:

Les trouvailles les plus importantes sont représentées, sans doute, par une dizaine des statuettes animales, sculptés en ivoire que Riek a daté de l'Aurignacien moyen et de l'Aurignacien supérieur dont les industries appartiennent selon l'auteur à l'interstade Wurm IIII. Quant à cette date, nous ne sommes pas tout à fait d'accord avec l'auteur et nous supposons que l'habitation aurignacienne dont les couches étaient situées au-dessus d'une strate argileuse que nous datons aussi comme l'auteur, dans l'interstade Wurm IIII, a commencé plus tard. N'entrons pas dans une discussion sur la chronologie de Vogelherd qui est, sans doute, une des plus importantes stations paléolithiques en Europe centrale. Mais en ce qui concerne les œuvres d'art seulement, une chose est à remarquer : dans l'ample monographie sur le Vogelherd, nous ne trouvons pas d'indications précises sur leur situation stratigraphique. Nous y apprenons seulement que Riek regarde les plastiques rondes comme appartenant à l'Aurignacien moyen et les demi-reliefs comme témoignages de l'Aurignacien supérieur⁴ (Freund, 1957, 16).

2 'Some spearheads with a spitted base and other objects made of bone and ivory, partially perforated or decorated with grooved lines at the margins, obviously fit perfectly to our Aurignacian Level I. ... But what about the animal sculptures with some of the best works of Palaeolithic European art? May we expect, already in this early time in the Central European Aurignacian I, in the first interstadial, such mature works of art?'

3 'Since comparable products [to the figures from Vogelherd Cave] were found nowhere else in Central Europe in that early time, but apparently there does not exist a real Late Aurignacian [Gravettian] at the Vogelherd Cave, one can only conclude that this art would come to the Swabian Jura from the West during the interstadial, to have then only in Würm III with very similar levels reached Moravia – a strange, but for now unsolvable discrepancy. In the far beyond the necessary width of the Vogelherd monograph, where much less significant finds are precisely fixed by their local position within the layer, one must strike at any rate, that to the circumstances of the finds as significant as the sculptures, nothing is announced.'

4 'The most important findings are represented, no doubt, by a dozen of animal statuettes, carved in ivory, which Riek dated to the Middle Aurignacian and Upper Aurignacian industries, these industries belong to the interstade Wurm I/II according to the author. Regarding the date we do not completely agree with the author and we assume that the Aurignacian settlement, whose layer was located above a clay layer, that we too are dating as the author,

Freund assumes that Vogelherd was to be settled later and explains this with the stylistic similarity of the figures with the findings from the Moravian open air sites. While it is true that Riek does not tell anything about the precise location of the figurines, he still indicates the layer where each one was found. Thus, Freund's critique is not fully justified.

The dating of the figurines to the Aurignacian is not doubted by Graziosi:

Auf französischem Boden sind bis heute in den Schichten des Aurignacien-Perigordien keine Tierplastiken gefunden worden. Tierdarstellungen, die einwandfrei dieser Zeit angehören, wurden dagegen sehr viel weiter östlich, in der Vogelherdhöhle (Württemberg), deren Schichten ins mittlere Aurignacien verweisen und an zwei mährischen, dem Périgordien zugehörenden Fundorten, Předmost und Dolni Vestonice zutage gefördert⁵ (Graziosi, 1956, 43).

He even very clearly says that these figures are the oldest known so far: 'nach unserer heutigen Kenntnis also ... die ältesten Beispiele dieser Kunst'⁶ (Graziosi, 1956).

André Leroi-Gourhan established a chronology of Palaeolithic art based on stylistic features in his comprehensive book on Palaeolithic art. He compares the figurines from Vogelherd Cave with the central and eastern European mammoth ivory figurines: 'Le domaine de la sculpture animale est le Centre et l'Est européen où les figurines se trouvent contemporaines des représentations féminines'⁷, thus the Gravettian.

A Vogelherd, dans le Wurtemberg, toute une série de statuettes d'ivoire a été découverte: félins, cheval, bison, mammoth. Dolni Vestonice a livré, en pâte d'argile et d'os broyé, des figurines de félin, ours, cheval, rhinocéros, oiseau. Předmost, en Moravie, a donné un mammoth de style très voisin de ceux de Kostienki et d'un mammoth de grès du gravettien d'Isturitz⁸ (Leroi-Gourhan, 1965, 63).

Stylistically, he sets the figurines of Vogelherd into the eastern and central European Gravettian, completely ignoring Riek's dating to the Aurignacian. For the Aurignacian he mentions only the engraved and painted blocks from the Dordogne, at which he defines his Style I. He clearly assigns the figurines from Vogelherd Cave to his style II, which is chronologically equivalent to the Gravettian (Leroi-Gourhan, 1965, 63, 67-68, 244-245). The fine and elaborate presentation of the figures seems to make a dating to the Aurignacian impossible for him.

In 1939 another figurative representation was found in the Lone Valley, but it was not recognised until 1969. Robert Wetzel began his work at Hohlenstein-Stadel in 1935, from 1937 to 1939 under the local direction of Otto Völzing. Fragments of worked ivory were found on the last day of excavation in 1939 in the back part of the cave. They were collected in a box and were stored together with the rest of the inventory from the Hohlenstein-Stadel in the Museum of Ulm. In 1969 Joachim Hahn, with the help of two colleagues, restored from about 200 fragments, one nearly 30 cm high figure with human and animal attributes, the so-called Lion Man (Hahn, 1970, 1; see also Kind, 2014, this volume, Figure 3). Since then, more fragments have been completed (Schmid, 1989; Wehrberger, 2007), most recently in 2013, after the discovery of new fragments during the excavations of the State Office for Cultural Heritage of Baden-Württemberg under the direction of Claus-Joachim Kind (Kind and Beutelspacher, 2009; Ulmer Museum, 2013). The stratigraphic position of the Lion Man is described by Hahn as followed:

Aufgrund der Tiefenangabe und der Erdschichten an den Elfenbeinfragmenten und an den Tierknochen läßt sich jedoch die ehemalige Fundschicht mit großer Sicherheit ermitteln. [...] Die Fundtiefe von 1,00 bis 1,20 m unter der Oberfläche ist die der unteren – rötlichgelben – Aurignacienschicht. Für die Zugehörigkeit zu dieser Schicht sprechen auch die rötlichgelben Erdreste an den Elfenbeinfragmenten und ihre schwach rötliche bis stellenweise braune Färbung⁹ (Hahn, 1970, 2-5).

in the interstade Wurm I/II, started later. We shall not enter into discussion about the chronology of Vogelherd, which is undoubtedly one of the most important Palaeolithic stations in central Europe. But with regards just to the works of art, one thing should be noted: in the large monograph on Vogelherd, we do not find any specific reference to their stratigraphic position. We learn there only that Riek attributes the sculptures as belonging to the Middle Aurignacian and the semi-reliefs as evidence of the Upper Aurignacian'.

5 'On French territory no animal sculptures have been found in the layers of the Aurignacian-Perigordian to that date. Representations of animals that belong to this period, however, were found much further east in the Vogelherd Cave (Württemberg), these layers refer to the middle Aurignacian and in two Moravian sites belonging to the Périgordien, Předmost and Dolni Vestonice'.

6 'according to our present knowledge... the oldest examples of this art'

7 'The domain of animal sculpture is Central and Eastern Europe and the figures are contemporary to the female representations'.

8 'A Vogelherd in Württemberg, a series of ivory statuettes was discovered: felid, horse, and bison, mammoth. Dolni Vestonice delivered in clay paste and crushed bones, figurines of felid, bear, horse, rhinoceros and bird. Předmost in Moravia has a mammoth stylistically very close to those of Kostienki and a Gravettian mammoth in sandstone from Isturitz'.

9 'Because of the depth indication and the rests of sediments on the ivory fragments and animal bones, however, the former find layer can be determined with great certainty. [...] The find depth at 1.00 to 1.20 m below the surface is the one of the lower – reddish yellow – Aurignacian level. The traces of reddish yellow sediment on the ivory fragments and their thin reddish, sometimes brownish colour confirm their provenance from this layer'.

He excludes an inversion from a younger Gravettian horizon, because there are no deposits from this period reported in the Lone Valley (Hahn, 1970, 5). The Lion Man from Hohlenstein-Stadel is thus further evidence of the early artistic creativity of the Swabian Aurignacian.

The assumed direction of creative influence in the 1950s was from west to east. In the 1970s opinion about this began to change. Züchner, in his thesis on the human representation in the French Palaeolithic, describes:

Auch die Tierdarstellungen aus dem Aurignacien des Vogelherdes im Lonetal (Süddeutschland) [...] lassen einen Einfluß von außen auf die Kunstentwicklung Frankreichs nicht unmöglich erscheinen, da sie sich weit über die sehr urtümlichen Werke des gesamten Aurignacien Frankreichs erheben¹⁰ (Züchner, 1972).

Slowly, the idea became accepted, that a very early epoch can produce very high-quality works of art. Likewise, a creative influence from east to west is considered, after a long period of a Franco-centric view on prehistory.

As the figures did not fit stylistically in such an early time, Riek's assignment of them to the Aurignacian has been questioned several times. Especially the excavation method and the shortness of time were strong arguments for the assumption that the figurines could not derive from the Aurignacian. But Riek's layer assignment is strongly supported by the results of the systematic excavations at Geissenklösterle in the Ach Valley, conducted in 1973 under the direction of Wagner, 1974 to 1991 by Hahn and, after his death, from 2001 to 2002 under the direction of Conard. In the 1970s, several ivory figurines were recovered in the Aurignacian levels AH IIa and IIb (Hahn and Wagner, 1976; Hahn, 1978; Hahn, 1982). This modern excavation brought to light figurines that are stylistically very close to those from Vogelherd and certainly come from the Aurignacian layers. From the layer AH IIa the mammoth figure and the upright bear originate, in the layer AH IIb the so-called Adorant and the bison figure were found. Thus, Riek's layer assignment for the figurines from Vogelherd Cave to the Aurignacian was confirmed (Müller-Beck, 1987, 10-11).

Although the figures from Hohlenstein-Stadel and the Geissenklösterle were already known, in 1993 Henri Delporte wrote, the new edition of his work from 1979:

Leroi-Gourhan classe les figurines animales du Vogelherd dans son style II, donc, en principe, dans la même période que celle, qui marque, en France, la fin de l'Aurignaco-périgordien et les débuts du Solutréen. On ne connaît pas la position de la statuette [anthropomorphe] dans la couche 4; on ne peut exclure qu'elle ait été associée aux pointes de la Gravette et qu'elle soit contemporaine des statuettes gravettiennes¹¹ (Delporte, 1993, 128-129).

He refers to the stylistic classification of Leroi-Gourhan and does not exclude an attribution to the Gravettian, although the Gravettian at Vogelherd Cave is not reported. In contrast, in his work on Palaeolithic animal representations, he also refers basically to the stylistic classification of Leroi-Gourhan, but classifies the animal figurines from Vogelherd and Geissenklösterle as Aurignacian, without further discussing this (Delporte, 1990, 145, 246).

In his work on the Ice Age art in Germany and Switzerland, Gerhard Bosinski does not deny Riek's dating for the figurines from Vogelherd to the Aurignacian (Bosinski, 1982, 11). However, he sees the outstanding design of the figurines as evidence that these figures cannot stand at the beginning of human artistic creativity:

Die Tierdarstellungen, besonders die Beispiele aus dem Vogelherd, sind in Ausdruck und Modellierung vollkommen ... Es ist ganz undenkbar, hier eine Anfangsphase künstlerischer Gestaltung zu sehen. Es muß Kunstgegenstände vor dem Aurignacien gegeben haben. Aus unserem Raum sind keine entsprechenden Funde bekannt, doch scheinen die Figuren von Sungir' [...] wesentliche Merkmale einer solchen Vorform unserer Tierstatuetten aufzuweisen¹² (Bosinski, 1982, 14).

10 'The animal representations from the Aurignacian of Vogelherd in the Lone Valley, Southern Germany, ... appear to have an external influence on the development of art in France, as they rise far beyond the very primitive works of the entire French Aurignacian'.

11 'Leroi-Gourhan classes the animal figurines Vogelherd in his Style II, therefore, in principle, in the same period that corresponds in France to the late-Aurignaco-Perigordian and early Solutrean. We do not know the position of the [anthropomorphic] statue in layer 4, and therefore we cannot exclude that it was associated with Gravette points and it was contemporary to the Gravettian statuettes'.

12 'The animal representations, especially the examples from Vogelherd, are perfect in expression and modelling ... It is unthinkable to see here an initial phase of artistic design. There must have been objects of art before the Aurignacian. From our region no corresponding findings are known, but it appears that the figures from Sungir'... have essential features of such a preform to our animal statuettes'.

Accordingly, the mobile art of Sungir in style and content provide for him a possible precursor of the art from Swabian Jura, 'denn es ist faktisch unmöglich, in den vollkommenen Vogelherdstatuetten den Anfang der Kunst zu sehen'¹³ (Bosinski, 1987, 32). Chronologically, Bosinski places the figurines from Sungir anterior to the Aurignacian (Bosinski, 1982, 19; Bosinski, 1987, 13; Bosinski, 2013). New dating shows, however, that Sungir, at approximately 26,000 to 27,000 BP, is significantly younger than the Swabian Aurignacian (Kuzmin et al., 2004; Dobrovolskaya et al., 2013).

New finds from Hohle Fels substantiate the fact that the earliest, highly elaborate Aurignacian art tradition is to settle in the region of the Swabian Jura. In 1999, a horse's head in mammoth ivory was found at the top of the Aurignacian layers (Conard, 2000). Other discoveries followed, for example, a piece from the AH IV in 2001 and in the following year its head, which allowed identifying this figure as a water bird. In 2002 a figure only 2.5 cm high was found in the same layer, which has strong similarities with the figure of the Lion Man from Hohlenstein-Stadel and is therefore called the 'Little Lion Man' (Conard, 2007; Conard et al., 2003). In 2008, at the base of the Aurignacian (AH Vb), the Venus from Hohle Fels was found (Conard and Malina, 2009). This figure shows distinctive sexual characteristics and has a bail instead of a head. It was probably worn as a pendant. It represents the oldest human representation to date. Recent finds from Hohle Fels clearly show that small figurative art made of mammoth ivory was a widespread phenomenon in the Swabian Aurignacian. So far nothing comparable in quality and quantity has been found in any other region. Although their quality is surprising, it has to be admitted that this sort of art is no exception, but probably more the rule in this region. The figures stand at the beginning of artistic creation of humankind and they bear witness to the astonishing ability of their creators.

The figurines of the Swabian Jura in the European context

Artistic creation is a common phenomenon at the beginning of the Upper Palaeolithic. This is proven by an increasing number of Aurignacian art-related artefacts in Europe. Some have been known since the end of the nineteenth century like engraved blocks from the Dordogne region of France, which show mostly pictographic vulvae representations and animals in simple outlines like in Castanet, Blanchard, La Ferrassie or Abri Cellier (for example, Delluc and Delluc, 1991). Their stratigraphic assignment to the Aurignacian is supported by the latest finds from excavations at Abri Castanet. There, an engraved and coloured limestone block was found in 2007, which had fallen directly on top of the Aurignacian layer and sealed it. Accelerator Mass Spectrometry (AMS) data reveal an average age of 32,400 BP for the Aurignacian settlement (White et al., 2012). Paintings from the Périgord, mostly animals, are also common, for instance, from Les Bernous, La Croze à Gontran and La Cavaille (Chiotti et al., 2007, 181-186). From Grotta di Fumane in Italy some small paintings on limestone blocks are known. The pieces were found within the Aurignacian layer, dating between 36,800 + 1200/-1400 and 30,320 ± 320 BP. Originally the representations were painted on the walls and the ceiling, but fell down on the settlement layers. Due to the break off, many motifs are no longer readable. However, two fragments are clearly recognizable: an animal and an anthropomorphic representation. The 18 cm high anthropomorphic figure is shown in front view with two horns on the head; the arms are stretched laterally from the body carrying an object in the right hand. Within the settlement layer, a large area with ochre scattering was found, indicating an intensive use of this pigment. This proves that the paintings must have originated in Aurignacian and not in an earlier phase of settlement (Broglio et al., 2007). Similarly as in the Grotta di Fumane, several limestone blocks with traces of colour were found in the Aurignacian layers of Abri Pataud, France, probably fallen down from the wall and the ceiling. Although the vast majority of these blocks were found in the Gravettian layers (n = 1414), a total of 9 pieces were found already in the Aurignacian layers 6 and 10/11. These are not specifically identifiable illustrations in red and black colour (Chiotti et al., 2007).

The spectacular parietal art from the Chauvet Cave provides an impressive testimony of Aurignacian art. The cave in the Ardèche Valley, France, was discovered in 1996 and shows a number of outstanding paintings. Direct ¹⁴C dating of charcoal used as a pigment yielded a time position of 32,500 to 30,000 BP, but there are also more recent dates ranging from 26,000 to 28,000 BP (Valladas et al., 2001a; Valladas et al., 2001b). Stylistically, the paintings are comparable with some paintings from the Solutrean and Magdalenian, and so this early dating has been repeatedly questioned by some researchers (Combiere and Jouve, 2012; Züchner, 1995; Züchner, 1998). Although there are quite justifiable doubts as to the dating of paintings with ¹⁴C (Pettitt and Pike, 2007), the assumption that these paintings were also elaborated for the Aurignacian is not convincing, as the example of mobile art from the Swabian Jura clearly demonstrates. The pure stylistic argument does not work out for the pieces from the Swabian Aurignacian either. Through new radiometric dating, more and more painted caves are considered Aurignacian. Charcoal residues in the two horizons from Grotte d'Aldène gave an age of 37,080 ± 620 BP to 30,260 ± 220 BP (Ambert and Guendon, 2005). For the so-called Panel de las Manos El Castillo, northern Spain, a date of about 40,800 years was obtained on uranium-series (Pike et al., 2012); ¹⁴C dates for the same site gave an age of 32,410 ± 720 BP (Pike

13 'because it is virtually impossible to see the beginning of art in the perfect statuettes from Vogelherd Cave'.

et al., 2012). In Altxerri B, northern Spain, recently a very high age was postulated for some of the paintings. A range of $34,370 \pm 280$ to $29,940 \pm 745$ BP was obtained by ^{14}C dating of herbivore bones (González-Sainz et al., 2013). A recently discovered cave in Romania, Coliboaia, has given a ^{14}C date of approximately 32,000 BP. The rhino and bear representations are stylistically very similar to the ones from Chauvet Cave (Clottes et al., 2011; Guy, 2012).

Likewise, mobile art from the Aurignacian is abundant. From El Castillo, in addition to the wall paintings, originate some small decorated objects, but these are hard to read and their artificial character is not certain. The beginning of the Aurignacian (level 18) was dated through AMS and ESR (Electron Spin Resonance), dating to an age between $42,200 \pm 2,100$ and $37,000 \pm 2,200$ BP. Some other sites in northern Spain delivered decorated objects in simple design (see also: Barandiarán and García Díez, 2007). From Belgium two objects from the site of Trou Magrite are known: a small anthropomorphic ivory figure and a carved reindeer antler decorated with abstract motifs. Since the site was excavated in 1867 by Dupont, the assignment of the two pieces to the Aurignacian is not certain. Their style and content is comparable with finds from West Germany and France and suggest an Aurignacian date. Recent studies of Duponts reports and new ^{14}C AMS dates of 38,000 to 34,000 BP were able to confirm that these pieces are Aurignacian (Dewez, 1985; Lejeune, 2007, 138-140). In 1988, a 7.2 cm large, anthropomorphic relief sculpture was found in Stratzing in Lower Austria. Unlike most other small works of Aurignacian art this is not carved in mammoth ivory, but schist. The layer in which the figurine was found dates back to about 32,000 BP. Because of the attitude and design in relief, a comparison with the Adorant from Geissenklösterle urges (Neugebauer-Maresch, 2007).

Artistic creativity in the Aurignacian was therefore not unusual, but – more and more discoveries confirm this – rather the rule. Although discussions on the dating problems of parietal art are not yet completed, small art from the Swabian Jura, which comes directly from the Aurignacian layers, leaves no doubt on the cultural assignment. The new ^{14}C AMS data from Geissenklösterle starting at maximum 42,500 cal BP prove that the Swabian Aurignacian is currently the oldest known Aurignacian in Europe (Higham et al., 2012). No precursor of these artworks has yet been discovered and thus the findings from the four caves of Vogelherd, Hohlenstein-Stadel, Geissenklösterle and Hohle Fels represent the oldest figurative art worldwide to date. All attempts to find older art forms are unconvincing. At the beginning of the Aurignacian strong changes in material culture are visible. Suddenly, we see ‘at least 600’ documents for artistic creation ‘from a total of at least 20 sites’ (Floss, 2007, 314; see also: Floss, 2005; Conard, 2007). The sites of the Swabian Jura stand at the beginning of human artistic expression and represent with more than fifty pieces the richest region for Aurignacian art.

The marks – a new research approach to the figurines

A striking, though still insufficiently studied feature of the figurative art of the Swabian Jura are the numerous markings. Many figurines bear sequences of marks, usually found in the form of parallel lines, crosses and cross-lines, diamonds, V-shaped signs and points. An important comprehensive study was carried out by Joachim Hahn (Hahn, 1986) in which he categorized and counted all signs on the then-known figurines and discussed them in relation to the representations. Unfortunately his statistical studies could not provide largely interpretable results. In view of the significance of the marks and a possible notation system, the work of Alexander Marshack should be mentioned (Marshack, 1972). He interprets a large part of the marks as notations of astronomical observations. Recent works, which deal with the signs on the figurines of the Swabian Jura, were done by Hansjürgen Müller-Beck (2001) and Harald Floss (2007). Müller-Beck interprets the marks as ‘clearly reflective’ and with an evident ‘scoring’ character, sometimes with astronomical information. Harald Floss emphasises the amount of decorated objects and the importance of the individuality of each figurine and its marks.

In Figure 3, the pieces investigated so far are listed. About half of all hitherto examined figurines bear marks (54%). The ones from Vogelherd are included as far as possible; the figurines for the other sites are to be regarded only as preliminary results. From Vogelherd Cave at least 31 reliable figures and fragments of figures are known, 22 of them bear markings of various kinds. Another 21 potential, not certainly identifiable fragments were recorded, of which 8 bear marks. Thus 58% of the figurative elements from Vogelherd are marked. The finds from this site alone show the enormous importance of marks in the Swabian Aurignacian.

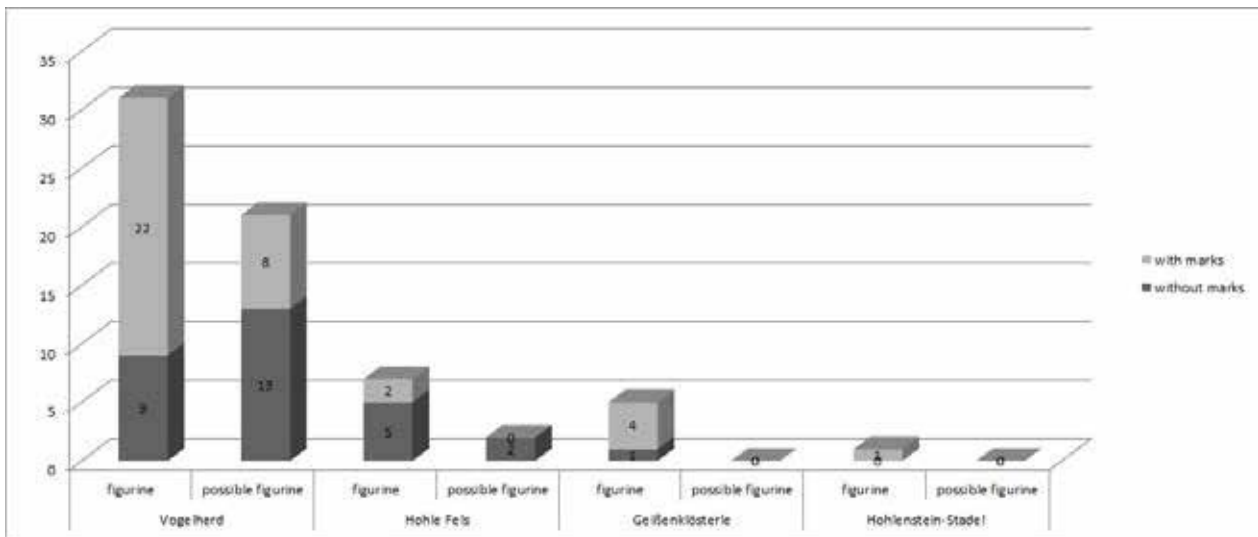


Figure 3. Overview of the number of so far recorded figurines from the Aurignacian of the Swabian Jura (as of 2013). Breakdown by marked and unmarked figurative representations and possible figurative representations.

Only little attention has been paid so far to the marks on tools and not precisely definable artefacts made of osseous material (ivory, antler and bone) and personal ornaments. Even if these are not to be found in such large numbers as on the figurines, they are still regularly present. In her dissertation, Sibylle Wolf has dealt with the ivory finds from Hohle Fels and Vogelherd

extensively. She recorded many tools and tool fragments with striking patterns. These are mainly cross lines and parallel lines (Hahn, 1977, Taf. 34.2-4, 36.2-3, 37.1, 58.2,4, 59.2-5; Wolf, 2012, Taf. 41.1, 42.1-2,4-5,7,9-12,15,17-31, 43.2-4). Hohle Fels and Geissenklösterle delivered the so called 'bands'; made in mammoth ivory and bearing parallel notches on the sides and interpreted as decorative elements (Hahn, 1988, Taf. 45.18; Wolf, 2012, 70, 72, 146-147, 171-173, Taf. 32.3). In addition to the figures and the figurative fragments from Hohle Fels, some ornamented rod fragments, points, jewellery and not specifically identified objects are known (Figure 4) (Wolf, 2012, Taf. 3.2, 4.1-4, 7.1, 8.1-2, 9.6, 10.3,9, 15.14, 15 a.1, 18.2, 19,1-2, 20.1-3,6-7, 28.6-7, 30.10-11). From Hohlenstein-Stadel a pierced cervid canine with four parallel lines on the front and two on the back is known (Beutelspacher and Kind, 2012, Abb. 36). From the Swabian caves, which have not yielded any figurative art, some other decorated artefacts are known. In Bockstein Törle a ring of siliceous shale with lateral notches was found (Hahn, 1977, Taf. 12.6; Wolf, 2012, Abb. 112.3). From Sirgenstein an ivory rod with notched edges is known (Hahn, 1977, Taf. 67.9) and from the Göpfelstein Cave derives a bone splinter grooved with X-patterns (Hahn, 1977, Taf. 69.10).



Figure 4. Selection of non-figurative decorated ivory and antler artefacts from Hohle Fels (1-10) and Vogelherd (11-13). 1. point, 2. point, 3. rod fragment, 4. extensively decorated ivory fragment, 5. basis of a point (antler), 6. rod fragment, 7. rod fragment, 8. band, 9. band, 10. band (pendant), 11. basis of a point, 12. smoother, 13. unidentified object (© University of Tübingen; all in Wolf, 2013).

Explanatory approaches

Looking at the interpretive possibilities, the first interpretation as fur drawings, especially in the case of animal figures, comes to mind. In some cases, this interpretation cannot be excluded, as, for example, in the case of the horse from Vogelherd, which carries a line of X-marks from the head to the tail, with a break in the part of the front legs. This could reflect the typical dorsal stripe that wild horses and many of today's horse breeds possess (Figure 5). Also, the irregular crossing lines on the soles of the complete mammoth figurine found in 2006 in Vogelherd could reflect the wrinkles that are clearly visible in elephant footprints (Figure 6).



Figure 5. Cross line ornament on the back of the horse from Vogelherd and dorsal stripe of a wild horse today (© University of Tübingen and Cologne Zoo, with courtesy of Waltraud Zimmermann).



Figure 6. Irregular cross patterns on the soles of the mammoth found in 2006 in Vogelherd and a footprint of an actual elephant (© University of Tübingen and Wuppertal Zoo, with courtesy of Norbert Sdunzik).

Despite these rather easily explainable features, other signs are enigmatic and it is not obvious what they could represent. As found, for example, on the mammoth that comes from Riek's 1931 excavation, several parts of the body bear cross lines and other signs. The cross lines are usually located in prominent places, such as the shoulder or the high forehead. This could be explained by the highlighting of those body parts, but many signs on the animal cannot simply be interpreted with natural features. On the right hip area a series of seven points is represented that does not occur on the other side. Also on the lower back, above the cross line on the tail area, a series of three marks appears. On the right head area there is a row of three points (Figure 7). The asymmetry of these markings stands especially against an interpretation as coat pattern – this is rather distinctive information, noted in a specific code.

On the left arm of the Lion Man, seven or eight clearly incised notches appear which are not found on the right arm. Additionally, the left ear bears some incisions that were recognised just recently during the 2013 restoration of the Lion Man (Ebinger-Rist et al., 2013) The situation is similar with the Adorant from Geissenklösterle. Although the relief of the anthropomorphic figure is no longer preserved in the uppermost layer, on the left of the raised arms at least five notches are clearly visible. In addition, the piece bears a total of 39 notches along the edges and 48 points on the back, which are often interpreted as a moon calendar (Marshack, 1972; Müller-Beck, 2001). All these marks cannot be explained so easily by natural features. Rather, it is clear that these marks transmit a certain content of information that has symbolic value and can only be read if one knows the clue. That the marks are not simply just coat patterns is particularly evident in the case of the decorated tools (Figure 4). The cross lines, for example, which are found on many different objects, certainly convey a substantive message.

How can the phenomenon be explained, that some marks look very similar to coat patterns and other or sometimes even the same marks appear to have elsewhere an abstracted symbolic content? Steven Mithen presented a theoretical explanation of such phenomena (Mithen, 1998). He describes a hypothetical evolution of the human brain that has developed certain areas, which have become specialized for certain tasks. To better cope with the many challenges of life, man, next to the general intelligence that is also peculiar to many other mammals, developed prepared intelligences on specific topics to make learning faster than would be possible with general intelligence, which allowed a modification of behaviour only



Figure 7. Mammoth figurine with numerous marks from Riek's excavation at Vogelherd in 1931. (© University of Tübingen, photo Hilde Jensen).

through slow and very frequent sampling. The areas that are particularly necessary for human life, such as language, social intelligence, technical intelligence and the so-called natural history intelligence are the basic structures for the individual zones. They are equipped with certain 'before settings' such as an understanding of grammar, that will be filled by the person during his lifetime. The system is designed for grammar, which language is filled in is secondary. According to Mithen, these different areas of the brain have developed differently in different stages of human evolution and have always acted independently. Only in anatomically modern human brains have these different areas become permeable and information can be viewed simultaneously from different angles. He calls this phenomenon the 'cognitively fluid mind'. Whether this theory, especially the different stages of development in detail, is founded or not shall not be discussed further in this point. What is important to this paper is the observation that modern humans can perfectly and effortlessly transform objects or ideas into a variety of other fields. It is so easy for us to use a certain object that acts as a basic commodity, such as a knife, as an expression of social ranking. Fortune tellers find it easy to read the flight of a bird and to make conclusions about upcoming events within a social society, and for the society, it is easy to believe this. Diverse examples can be found for it. Taking this into account, it is obvious that certain natural observations, such as the highly visible dorsal stripe in a wild horse, is incorporated in the presentation and probably has a content beyond the mere reproduction of what is seen and has a deeper meaning. Similarly, the appearance of wrinkles in the footprint of a mammoth may carry a broader cultural significance. And beyond, such signs can become independent and be used as a vehicle to transport this or other meanings to other objects. Even if this is difficult to prove, since we do not know the code for these symbols, it is very likely that the application of such marks goes beyond the mere decoration of objects.

What opportunities are available to study the marks on the Swabian Aurignacian figurines? On the one hand, a complete recording of the repertoire and a statistical analysis of the occurrence and absence of certain marks at the sites, the determination of combinations and the appearance of signs in certain representations are to be carried out. Through this, an approach to the 'grammatical' structure of the marks is aimed and should lead to a deeper understanding of the semantics of the Swabian Aurignacian signs repertoire. On the other hand, the technological analysis is an important aspect. First, there is the identification of the tools and thereafter the applied movements and gestures, which are used for carving the marks. In a final step it will be investigated whether there are significant differences in the technique so that it will be possible to retrieve certain patterns and to identify characteristic styles of groups of people (for instance, right and left handed) or even individuals (Figure 8). This would help to understand the making of this art, to define if it was done by all group members or by several individuals as well as to comprehend the social context and impact of this artwork. A review of existing models and new models of explanation for the analysis of the sign will follow. These analyses are currently being prepared by the author. No results can be presented at the moment.



Figure 8. Detail of the marks on the lion relief from Vogelherd (© University of Tübingen, photo Hilde Jensen).

Conclusions

The Vogelherd Cave is one of the most important sites in Germany with Middle and Upper Palaeolithic deposits. It was discovered by Hermann Mohn in 1931 and excavated by Gustav Riek in the same year in just three months. In the years 2005 to 2012 new excavations in Riek's backdirt were conducted under the direction of Nicholas J. Conard and completed the inventory with many important discoveries. Vogelherd was inhabited by people since the last interglacial period, the Eemian. First, it was an important station of the Neanderthals, which is demonstrated in four Middle Palaeolithic layers. After the Neanderthals had withdrawn from the area, shown by a sterile layer between the Middle and the Upper Palaeolithic, anatomically modern humans arrived following the Danube Valley about 43,000 years ago (Conard, 2002; Conard and Bolus, 2003) and established themselves in this area with the Aurignacian culture. Here they created art, personal ornaments, musical instruments and there is evidence for religious beliefs. Since its first discovery by Gustav Riek in 1931, the figurative art of the Swabian Jura still remains mysterious. Riek's observations, that the figurines come from the Aurignacian, were not initially universally accepted. Their most elaborate drafting was often the reason for doubts, as the figures stand at the beginning of human artistic creativity. Until the 1980s and beyond this was questioned by some scholars. Even if Riek's descriptions could still be questioned and a false layer assignment remains possible, the strongly resembling finds from modern excavations as Geissenklösterle and Hohle Fels then confirmed the early date of the finds from Vogelherd. A layer assignment to the Aurignacian cannot be questioned nowadays, especially since the stylistic comparisons with Gravettian figurines from Central and Eastern Europe become obsolete, as there is only minimal evidence for the presence of this techno-complex in the Lone Valley. Up to the present day, the figurines of the Swabian Aurignacian represent the oldest evidence of figurative art worldwide. Recent dates show that the Aurignacian of this region starts around 43,000 BP and thus belong to the oldest in the European context. Other sites with Aurignacian art are significantly younger or do not have such an outstanding ensemble of unique artwork and symbolic expressiveness. Due to the eventful history of research the figures from Vogelherd, Hohlenstein-Stadel, Geissenklösterle and Hohle Fels are now displayed in different places (see below: Museum Schloss Hohentübingen, Prehistoric Museum Blaubeuren, Ulmer Museum, State Museum of Württemberg Stuttgart and Archäopark Vogelherd).

Although much has been written about the figurines of the Swabian Jura, the striking marks attached to almost all the figures remain enigmatic. Some attempts to interpret them have been made. Joachim Hahn first recorded the sign inventory and presented first statistical analysis (Hahn, 1986). Alexander Marshack examined the marks on their astronomical value and got some interesting results (Marshack, 1972), but these are not convincing for the whole ensemble though. The studies of Hansjürgen Müller-Beck aim for a similar direction, favouring an astronomical interpretation especially for the Adorant from Geißenklösterle (Müller-Beck, 2001). A new recording and reassessment of all accessible marks of the Swabian Aurignacian today is currently undertaken by the author. Besides quantitative and qualitative studies, technological analyses are carried out. A statistical study of the 'grammatical' structure of the sign inventory aims to approach the semantic content of the marks, even if a full decryption certainly cannot be achieved.

The Vogelherd Cave stands at the beginning of the history of research in a particular region (see further Bolus, 2014, this volume) that together with its other famous sites – Hohlenstein-Stadel, Geissenklösterle and Hohle Fels – gives us insights to one of the most decisive phases of cultural development of man. The oldest evidence for figurative art, three-dimensionally shaped jewellery (see further Wolf, 2014, this volume), music and religious expressions (see further Conard, 2014, this volume) is found there. These sites shed light on the origins of what is now called the cultural modernity and is visible in a fully developed manner around 40,000 years ago. The value of these four sites for the understanding of human cultural development cannot be rated highly enough.

Whereabouts – the museum presentation of the earliest art

The Museum at the Schloss Hohentübingen

The figurines from Gustav Riek's excavation initially remained in his private collection. After the Second World War, he kept them in a bank vault for a long time. After Riek's death, they passed into the possession of his heirs. In 1978 the University of Tübingen finally bought the figures from Riek's family. Since then, they remain in the possession of the University. First, the figurines from Vogelherd were exhibited in the University library until they were brought to the museum at Hohentübingen Castle in 1998. Today they are exhibited there within a newly designed exhibition that was opened in May 2012.

The Prehistoric Museum Blaubeuren, Urmu

The history of the Prehistoric Museum in Blaubeuren dates back to Gustav Riek. In 1963 and 1964 he set up an exhibition to showcase the finds from Brillenhöhle and Große Grotte. In the years 1979 to 1984, the permanent exhibition was redesigned by Joachim Hahn and Hansjürgen Müller-Beck. In 2002 the museum was extended by the 'Art Gallery 40,000 years'. Currently, the museum is under reconstruction and will reopen in 2014. The figurines from Hohle Fels will be presented there and the Venus found in 2008 will be a special highlight of this exhibition.

Museum Ulm

Robert Wetzels was, like Gustav Riek, owner of his finds from Hohlenstein-Stadel. He kept his discoveries in the city museum of Ulm where he eventually bequeathed the entire collection. Among them was the box with the carved ivory fragments, found 25 August 1939, on the last day of the excavation in the Stadel Cave. In 1969 Joachim Hahn reviewed the collection and put the ivory fragments together. The 31 cm high figure of the Lion Man was refitted. After several restorations, the figure was completed in 2013 with the newly found fragments from Hohlenstein-Stadel that were recovered during the excavations of State Office for Cultural Heritage of Baden-Württemberg. The newly restored figure of the Lion Man has been displayed in the Museum of Ulm since November 2013.

State Museum Württemberg

Joachim Hahn's excavations at Geissenklösterle ran on behalf of the State Office for Cultural Heritage of Baden-Württemberg. The figurines from this site have therefore been assigned to the Württemberg State Museum in Stuttgart. Likewise there are two finds from Vogelherd Cave that were found after the excavation by collectors and were brought to the State Museum of Württemberg. Since May 2012, the permanent exhibition has been displayed in a new design.

The Archäopark Vogelherd

On 1 May 2013 the Archäopark Vogelherd was opened. A 6.5 acre outdoor area has been modelled with several Palaeolithic themes and action areas. The site of Vogelherd is located within the park and is incorporated into the trail through the park (Figure 9). In the visitor centre two original finds are presented: the completely preserved mammoth found in 2006 and the lion figure from the same year. Conceptually, the Archäopark is designed as a learning and adventure park, where visitors are able to explore Stone Age hunter-gatherers lifestyle.



Figure 9. Overview of the outdoor area of the Archäopark Vogelherd (©Archäopark Vogelherd, Photo G. Serino).

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