



Projekt-
Die Burg



The Beginning **A Sherd**



The Beginning

A sherd. We do not know much about it. This fragment was formed by hand, by the muscles of the potter, by the balls of their hands, and by their ten fingers. This piece marks the beginning of our search, which we want to bring you.

It is likely that a man created this piece – though maybe a woman, which would not have been unlikely. The sherd is light grey. It was fired in a kiln made of loam and fueled by wood but did not reach a high temperature. The people that fired this fragment most likely lived in the 13th or 14th century. The granulation and colouring imply this. The fragment is slightly curved. It was probably a piece of a vessel – but of what type?

We do not know.

What we do know is that the sherd was lying in black soil when we found it. It was lying on the forest floor, kicked out of the humus by the boot of a hiker or the hoof of a deer or washed out by the rain. For the first time in many centuries, the sherd could once again feel the warmth of the sun.

We do not know what purpose it served to the people at that point in history. Was it a part of a mug, or part of a pot? Yet now the purpose of the sherd is to lead us into the past.

This sherd is our time machine.

It is our link between us and the people who originally produced this piece: those who, back then, lived at the place where this sherd was discovered, through good times and bad, who loved one another and likely bore children here. They also probably died on this mountain top, on top of which this imposing castle once stood and where now only the remnants remain visible.

A fragment.

This piece is the beginning of our search, on which we would like you to accompany us.

Yet be forewarned:

We do not know where this search will lead us. This is a journey with an unknown destination.



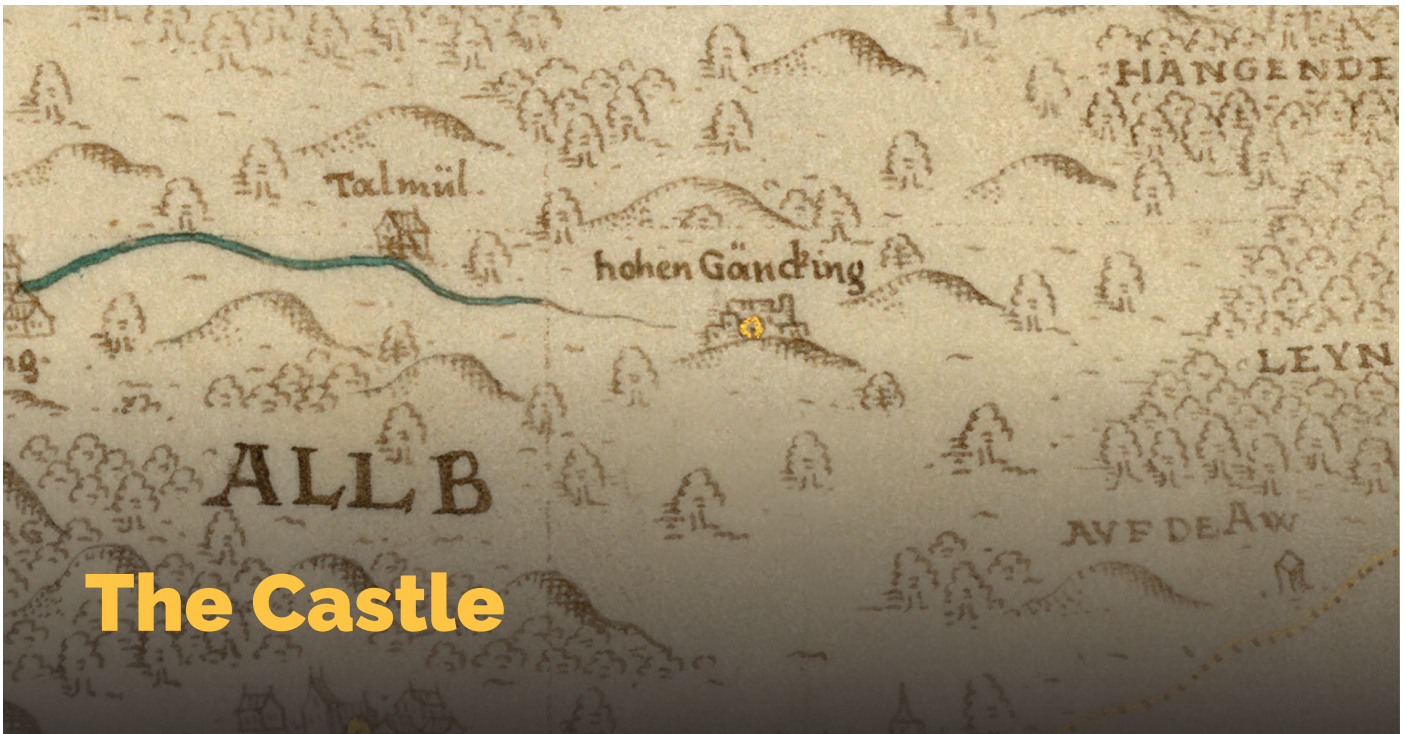
The Mountain

From afar, it is already clear that this is a special mountain. Its slopes draw upwards almost symmetrically, giving it the appearance of a pyramid. The mountain is located in the Swabian Jura, a low mountain range in the state of Baden-Württemberg.

The mountain towers far over everything in its surroundings. Located on the plateau of the Swabian Jura, a low mountain range in Baden-Württemberg. A world comprised of limestone, small villages, large pastures, and small fields. While the current nature of the region is rather provincial, in the Middle Ages it was the nucleus of numerous noble families who played major roles in the Reichspolitik: the Staufer dynasty that dominated Swabia in the 12th and 13th centuries, the counts of Achalm (who are today only known to historians), and of course the House of Hohenzollern.

They all had their beginnings in the narrow valleys on the northern rim of the Swabian Jura. Here, the mountains soar 400 metres above the surrounding countryside like a gigantic rampart. It was on top of these hills that those noble families built their castles. The Swabian Jura is one of the nurseries of the Empire.

“Hohengenkingen”. 861 metres tall. The mountain begins as farmland, then becomes a meadow dotted by individual trees that were once used by shepherds to shield their flocks from the rain. A forest appears shortly before the summit before it ends as a small, elongated bedrock ridge.



Only experienced locals know the way to the castle; a narrow path meanders its way upwards to it. A location defined by many ancient legends

No sign shows the way. Even residents of the surrounding villages – villages that were once under the dominion of this castle – are unaware of the castle's existence.

A historical location that has increasingly over the centuries disappeared from the public consciousness. This is in stark contrast to the year 1592 when one of the early cartographers and his colleagues were tasked by the Duke of Württemberg to document the ducal holdings. While searching for contemporary castle grounds on the map proves to be a futile gesture, the cartographer Georg Gadner chose to prominently depict Hohengenkingen – which at that point was already in ruins. One could even recognize architectural details. Is this a coincidence?

Local folklore revolves around this castle; they are distant memories of a place of great meaning, albeit a meaning that is rapidly fading into obscurity.

The castle appears to be simply one of many but that is not the case.

The once imposing walls have long since eroded. Farmers from the surrounding area had, as was common in those days, dismantled the castle stone by stone to construct their farmsteads down in the valley.

Though not completely – there are still remains. Foundations, defensive walls, and towers still exist below the moss-covered surface.

One could leave it that way – if these last testimonies were not at risk of disappearing.

They are disappearing before we have fully understood what they mean.

This time, however, it is not local farmers tearing down the castle. It is global heating. The intense drought and high temperatures plague the ruins. The rising temperatures extract moisture from the mortar of the wall joints, thus causing the mortar to crumble. Walls, that were a metre and a half tall 35 years ago, have shrunk to just a few centimetres. They have collapsed, buckled; across the entire area, one stumbles upon new, lightly coloured stone debris.

If nothing happens, then the last remnants of this historical site will have completely vanished and along with it another memory of who we once were and how we became who we are today. History is not a luxury. It is the mark on our bones, the perpetual conflict with our identity.



Our Project

This isn't about merely preserving walls. This project is about something much bigger.

We are taking this project in an unusual direction. Within the field of archaeology, private initiative is still an exception. If we do not do anything, then nothing will be done. And we refuse to continue to watch the castle decay without taking action. The state cannot tackle this on its own. If the walls of this castle stood in the centres of cities such as Tübingen, Marburg, or München, something would have been done to prevent their deterioration long ago. A classic example of the differences between the countryside and the city.

What we want is two-fold: to turn this necessity into a chance. We want to rescue and research. We are archaeologists and historians, we are journalists and local politicians, we are professionals and laypeople that have come together for this project. Furthermore, we will coordinate with and be advised by the State Office for Monument Protection of Baden-Württemberg as they provide the project with their technical support.

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Archaeologists seldom have time. They are almost always working under pressure to meet deadlines. Their daily lives often consist of rescue excavations that require the documentation of archaeological features that are endangered by construction work and/or development. This often directly conflicts with the interests of construction companies and their desire to finish construction as quickly as possible. In regards to Hohengenkingen, this is precisely our chance in the face of adversity.

With all of the archaeological tools at our disposal, we are seeking to learn more about the history of this fascinating site. We, too, are in a race against time; more and more of the site decays with each passing year, but we have more time than German researchers typically have. Therefore, this castle is unique in that it offers archaeologists the opportunity to learn more about the lives of its former inhabitants without the immense pressures that typically accompany rescue excavations.

We want to know who these inhabitants were, how they lived, and what they subsisted. How they constructed their structures. Questions that may not be able to be answered. We aim to learn more about the nature of trade during this period. Built during the time when castles were built on mountaintops in many places in Central Europe, castles like Hohengenkingen are among the birthplaces of modern administration and statehood. Due to a lacuna of contemporary source material, among those surviving are sparse property deeds and few chronicles, we have the chance to fill in Hohengenkingen's historical gaps by using one of the most important sources for this period: the soil. Walls. Bricks. Ceramic sherds.

It is unclear who the builders were. Presumably, it was the lords of Genkingen, but this is not entirely certain. We do not know how they were embedded in the empire's power system or their tasks therein. Furthermore, little is known about the precise function of this unusual castle. We do not even know its exact dimensions. This raises the question: were the medieval lords actually the first to build a castle on this prominent peak?

The castle is the perfect time capsule for archaeologists. Many people, from different social classes, lived here in a confined space. A castle does not only tell of the nobility – it also elucidates the lives of the peasants, servants, and traders for whom the castle was also the centre of their lives. A castle-like Hohengenkingen, when untouched, is akin to a central archaeological archive for the regional hinterland. Such a diversity of information has rarely been preserved in the surrounding villages.

What makes the Hohengenkingen project so particularly exciting for researchers is that the site was never rebuilt after it was abandoned. Furthermore, it can be assumed that the castle was not simply abandoned, but suddenly destroyed, presumably during the uprising of the Swabian League of Cities in 1377. This was likely carried about by an army that marched in front of the castle, stormed and pillaged it, and thus there is a good chance that the last day of the castle remains untouched in the ground.

Was Hohengenkingen then the site of a medieval battle? We want to explore this possibility too. We don't know how much of it has survived, but we hope that Hohengenkingen can help further elucidate how battles and small wars were fought in the Middle Ages. They were a plague of their time and they ter-

rorised the rural population; but, once again, we know little about them. What did these battles really mean, and how were these wars of the lesser nobility fought in detail?

This project is collaborating with universities and technical colleges. The project 'The Castle' is also meant to be an educational project and wants to involve interested people as often as possible. We want to make professional discourses and debates transparent. Science usually does not have only one answer and we want to evaluate and describe theories and methods transparently to make it possible for the layperson to experience – what has become more important than ever today – the enlightened handling of scientific knowledge. This requires mature citizens who understand what science is: an ongoing discourse based on circumstantial evidence.

There are many reasons to embark with us on this journey through time, and we are inviting you to come along!



Written sources. Forensics in the archives.

The historical record. The lords of Genkingen wander through the medieval charters as if they were ghosts. Who were the lords of the castle? Until now, this has yet to be thoroughly investigated – a project that we want to kick off.

What we know so far: around 1100 CE, a lord of Genkingen appears for the first time in the Zwiefalter Abbey chronicle composed by the monk Berthold. The chronicler reports that Rather von Genkingen had previously been a knight in the service of Count Kuno von Achalm before he left his wife and his two sons Konrad and Eberhard in old age to enter Zwiefalten Abbey as a humble monk. In addition, he transferred his landholdings in Willmandingen and Kohlberg to the abbey. Rather's exact intentions for doing so are unclear, but donating property and retiring to a monastery was not uncommon at that time – especially in noble circles. Many viewed monasteries as institutions of great piety and often donated large possessions to the church in order to attain salvation.

During the Investiture Controversy (1073–1122), this piety was particularly widespread and pronounced. Control over the right to appoint bishops and abbots brought the Salian Emperor Henry IV and Pope Gregory VII into open conflict – but in principle, it was about whether the state or the church held supremacy. The lords of Genkingen at the time, the Counts of Achalm, were passionate allies of the papacy and that is perhaps why Rather von Genkingen not only richly endowed the monastery of Zwiefalten with four farms, but also entered the service of the Church himself.



Though during the Investiture Controversy, Hohengenkingen Castle probably did not yet exist. But since Rather was entered into the chronicle of Zwiefalten Abbey with the addition of 'Genkingen', one can assume that the place was of central importance for him and his family. Whether or not Genkingen was his actual residence is difficult to trace today.

Perhaps it was a lordly manor located directly in the settlement of Genkingen, as was quite common at the time. There is evidence of two other smaller castles in the Genkingen district. Yet since there is no definite knowledge about them to date, it is unclear when they were built. The surface finds collected there indicate that at least one of them was inhabited in the 13th century and possibly abandoned again before the year 1300. Further details are unfortunately lacking.

It was probably not until around 1200 that the noble family moved from the valley to the mountain above Genkingen where the 'new' castle, Hohengenkingen, emerged. Wherever Rather von Genkingen and his family ultimately resided, he was not the only lord. From another source, the Codex hirsaugiensis, we learn that at about the same time Rather decided to enter Zwiefalten Abbey, the powerful Count Friedrich I von Zollern bequeathed the church in Genkingen and all of his corresponding properties to the influential Hirsau Abbey in the northern Black Forest.

By that time, a legendary ruling dynasty had already been guiding the fortunes

of the German lands for 60 years: the Staufers. In exercising their rule, they increasingly relied on servants whom they bound to themselves. Such retainers were called ministeriales. Their tasks were, among others, to administer part of their lord's landed property or to take on military duties.

As to whether the Genkingers belonged to the direct Hohenstaufen ministerials at that time, no direct information is known. But documents attest to their proximity to the Counts of Hohenberg, the Counts of Württemberg, the Lords of Ehingen, and connections to the monasteries of Pfullingen and Bebenhausen that were under imperial bailiwick at the end of the 13th century. Thus, this would lead to the assumption that the Genkinger family belonged to that illustrious circle of nobles at that time, which is usually referred to by researchers as 'imperial ministeriality'.

Yet again, this is an assumption. What is clear, however, is that the Genkingers appeared in the Gammertingen area in the 12th and 13th centuries, some 20 kilometres away from the castle. There they acted as ministeriales of the ruling dynasty, the Counts of Ronsberg, and later the Counts of Berg, in order to represent their interests.

The extensive properties that belonged to the Lords of Genkingen in the 13th and 14th centuries serve as another indication of their elevated position during the Staufer period. Contemporary sources reveal that the Lords of Genkingen controlled not only a majority of the area surrounding Genkingen but throughout the entire region. We know about possessions or individual estates in Belsen, Buch, Steinshofen, Johannisweiler, Oberriexingen, Oberöschelbronn, and Rottenburg.

Their possessions were located up to 90 kilometres away from their castle.

These were mostly small estates, which were often only in the hands of the family for a short time. One often only learns about them through deeds of sale and therefore one must assume that such possessions primarily served as a means of disposal and that were quickly exchanged for other goods, sold, or given away if necessary.

For those of us who were born much later, these landscapes seem very strange. In the 13th century, there were hardly any 'territories' or spaces that were controlled by a central authority. Rather, power and access over an area were defined by individual rights, such as the right to tithe, the ownership of serfs, the right of patronage for the local church, or jurisdiction over an area. The more such rights someone possessed, the more unrestrictedly he ruled over an area. The people of Genkingen probably held many of these rights over time, such as the bailiwick over the church in Genkingen in 1300.



Their wealth was also probably fed by the castle's strategically advantageous location on three ascents of the Swabian Jura – already back then the knights obtained considerable secondary incomes through the collection of tolls and rights of escort.

Yet throughout the 14th century, the tide began to turn for the lords of Genkingen. Between 1311 and 1316, and again between 1377 and 1388, the lords of Genkingen were being pulled into the simmering conflict between the Imperial crown, the Counts of Württemberg, and the Swabian Imperial Cities. This would then immediately suggest that the destruction of the castle can be placed in the period after 1377 when the southwestern Imperial Cities joined forces to put a stop to the growing territorial greediness of the Counts of Württemberg and the Emperor.

As a part of the Swabian League of Cities, the Imperial Cities fought for their civil rights and liberties. It was for this very reason that the cities of Reutlingen, Biberach, Ulm, and around 20 other cities hired a mercenary army that was not limited to the pure defence of the cities' rights. The army attacked and destroyed castles – one of them being Lichtenstein Castle, the predecessor to the famous mansion situated on the hills above the Echaz Valley.

The knights of Lichtenstein Castle could have had close relations with the Genkingers. Thus, incendiary arrows may also have flown over the castle wall at Hohengenkingen. When high clouds of smoke engulfed the complex, the nobles of Genkingen and their entourage had no choice but to give up or flee.

It is entirely possible that the circumstances of the time put the lords of Genkingen on the defensive and that this heralded the inevitable decline of their house, although many other factors would certainly have been at play.

Extant sources describe in sober terms that in 1428, the noble family sold, or rather were forced to sell, half of their property in Genkingen – more precisely the jurisdiction, pasture, tithe, tavern, and mill – to the Pfullingen Convent of the Poor Clares. Roughly 20 years later, they sold the remaining half of their property. The Genkingers thus met the same fate as so many other small southwest German noble families in the late Middle Ages.

The Genkingers were unable to find a place within the relentless struggle for power and influence between the great territorial lords, imperial cities, and emperors. The once proud ministeriales had now become mendicant knights.

An echo of this decline can also be found in the legend of the poor damsel of Hohengenkingen: 'The damsel's father and mother had died, and she had no other relatives left. Then it happened that a great dearth came over the land. Bread became so scarce that it could hardly be bought with money. The noblewoman soon had to sell one plot after another from her parental inheritance so that she could feed herself and her servants.' In the end, she is said to have promised the village of Genkingen the castle along with the forest belonging to it after her death in exchange for a loaf of bread and a jug of water every day. The people of Genkingen turned down the offer, while the neighbouring people of Undingen accepted her offer. The legend suggests that it is for this reason that the ruins of Hohengenkingen today lie on the territory of Undingen and not Genkingen.

In the second half of the 15th century, a representative of the Genkingen noble family appears for the last time in the sources, and then the lineage possibly disappears completely. In any case, the Genkingen family finally sunk into oblivion.

The mountain ridge that the castle was constructed on begins above the village of Undingen as a meadow, out of which project several rocks. These days it still serves as a spectacular vantage point that offers views far into the Swabian Alb. From here, one can sometimes see the Swiss Alps. An almost overgrown path leads along the crestral ridge into the forest.

A circular, man-made pit becomes visible just past the edge of the forest and to the left. Michael Kienzle, the castle specialist from the University of Tübingen, has observed numerous types of these pits in the vicinity of castles. But no one knows what purpose they served. Some 70 metres in front of the ruins and to the left, there is another roughly square pit in the soil whose edge length amounts to 8 metres.



The Tour around the Mountain – the anatomy of a ruined castle

We invite you to come tour the site: some people say that there is not much more here to see. They're mistaken! Have a look for yourself. Come on in!

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As with other landforms around Hohengenkingen, the question of whether or not it belonged to the medieval noble castle remains unanswered.

We are coming upon the first castle moat. It crosses the mountain ridge and is accompanied in front by a rampart for about 15 metres.

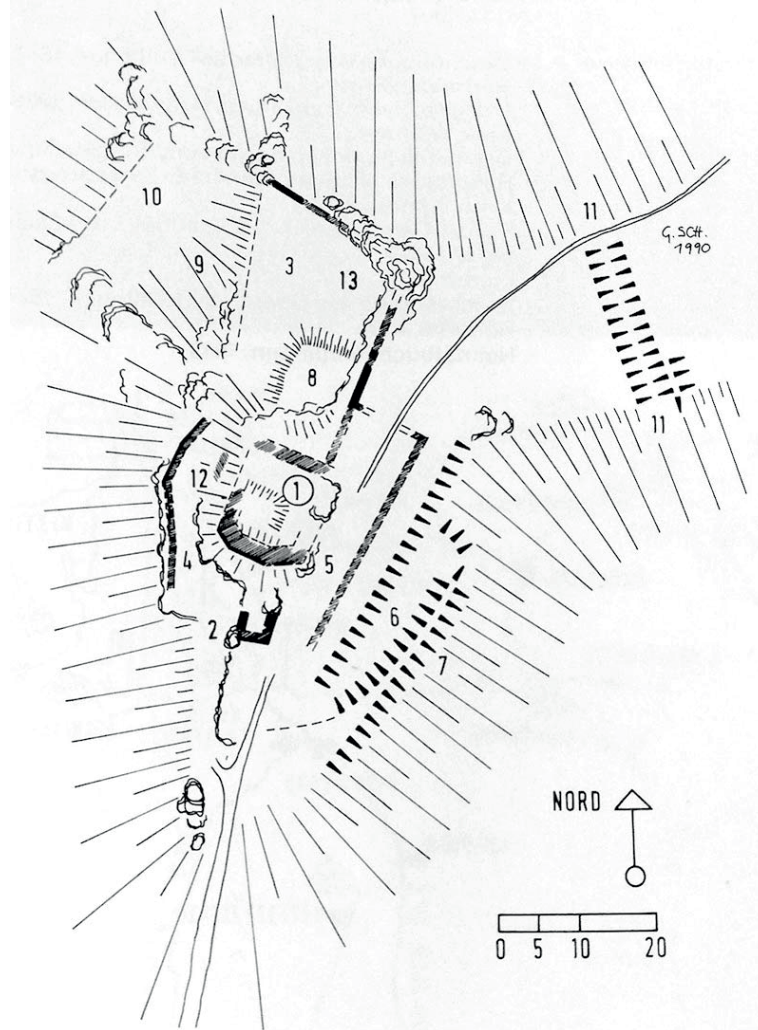


From this position, two pathways are visible. One, which can barely be seen, turns off to the left just before the moat, while the other carries straight on. The church painter and amateur castle researcher Konrad Albert Koch illustrated this situation in his reconstruction of the castle around the year 1900. At that time, he assumed that both paths were of historical origin and that they used to lead to the gates in the curtain wall.

While the gate on the right guarded the main entrance to the castle, Koch posited that there was an additional smaller gate to the left. 80 years later, another castle researcher, Günther Schmitt, revisited Hohengenkingen. In his guide concerning the castles of the Swabian Alb, he put forth the idea that only the left gate of the two proposed by Koch had existed.

The shape of the terrain – which likely looked the same around 1900 as it does today – probably has not much to do with the situation of the medieval gates. It is thus plausible that after the castle had been abandoned, the ramparts and parts of the moat were levelled.

Following the path further, we pass by the moat. To the left is the first recognisable structure of the actual castle: perhaps the advanced outwork. We do not know what exactly stood here. An initial tower? A protruding wall? Here, an up to 80-cm-high wall with corner ashlar is preserved. Here, between the moat and the beginning of the advanced outwork, is where Schmitt places the castle gate but its exact position can no longer be identified from the surface alone.



Following the almost vanished path to the left, you stumble across something that resembles a gallery – an elongated flat surface. Underneath the gallery is the largest preserved section of the castle’s wall: the southern rounded end of the Zwinger, or outer courtyard.

This, however, could quickly change as the Zwinger is acutely in danger of collapse.

A Zwinger is a fortification wall in the front of the curtain wall that sought to impede the storming of the castle. In terms of defence, a staggered fortification makes approaching the castle more dangerous. While the attackers are busy trying to take the Zwinger, the defenders above can already begin attacking them from the safety of the walls of the inner bailey.

Below us, under the still imposing Zwinger, the slope drops steeply. Above us to the right – still several metres high – is the heart of the castle, probably a typical tower house, or the keep (1 on the ground plan).



The structure has suffered tremendously over the years. Schmitt, who had, up to this point, most extensively analysed Hohengenkingen, posited that the keep was originally accessed from the rear of the western bailey (12).

The keep served as both living quarters and as a defensive structure and forms the most important element of high medieval castle design (ca. 1000-1250). In late medieval castle design (ca. 1250-1500), the tower castle was replaced as the main construction type by the concentric castle in which the residential and defensive functions were structurally separated. This allowed for the residents to live in a comfortable and safe space while shifting the defence of the castle to the keep overlooking the enemy side.

The escarpment's terrain becomes too difficult and forces us to turn around at the western Zwinger. It is time to head back to our main path, to the moat, and ascend the almost four metres to the rest of the keep.

The main structure of the castle has a square floorplan measuring ca. 14 x 12 metres with signs of bevelled corners. There, the small ashlar masonry has been preserved up to a metre tall and is otherwise concealed by debris. We can imagine the keep as a multi-storey solid building that could have measured 20 metres high. Due to the thick outer walls, the timber-framed residential storeys offered only limited space. An elevated entry typically led directly to the first or second upper storey where the lordly living area began, while the lower rooms of the keep were used, for example, for storage.

Coming down from the keep to the north, we again reach a level surface, measuring ca. 20 x 20 metres, that Schmitt labelled as the 'outer bailey' (3). Sloping debris in the direction of the keep could indicate the site of a former building. To the northeast, towering pointed crags and clay tile finds attest to further interior construction.

The crag, which reaches heights up to five metres high in the east, merges into drystone walls to both the south and the west. Its existence is also endangered. Typically, the outer bailey functioned as the castle's commercial hub. Commercial buildings and facilities stood here that supplied the castle's inhabitants and visitors: workshops, stalls, silos, and also servants' quarters, bakehouses, etc. It is unclear what, if any, of those types of structures were presented at Hohen- genkingen.

To the west, the outer bailey area drops off ten metres deep to form another flat surface. The remnants of an encircling wall may still be hidden under the soil that connects to the western Zwinger to the south. The remains of a now- lost lower outer bailey may be situated here, framed to the north and to the south by crag ribs (10).

If you climb back up the ca. 20 metres to the keep, crossing over both terraces, you can stroll northwards (with proper shoes!) along the narrow ridge of an elongated curtain wall with the double terraces of the outer bailey and lower outer bailey below you.



We now depart the keep again in the direction of the eastern moat. From there, we turn left onto the hiking trail. The southeastern Zwinger soon ends to the right of us and – as it appears – with a slight bend towards the northwest. Was there another gate here? We are walking – initially with the towering wall still accompanying us on the left that encloses the ‘outer bailey’ (3) – on a space measuring ca. 23 x 27 metres that does not appear to be walled in. It is confined by the outer moat (11) and by the slope edge to the northwest and southeast. This area is also likely a part of the outer bailey, but there has been hitherto no evidence of stone structures and a wall that ends to the east. It is possible that there were wooden structures here.

The hiking trail leaves the castle to the northeast and passes a second, deeply dug-in moat on the right. The trail then switches to the western flank of the mountain ridge, from where it eventually descends into Genkingen in a serpent-like fashion.



The ridge on which Hohengenkingen is enthroned continues north for another 300 metres and ends at two 15-metre steeply sloping crag towers. A small gap in the right crag tower opens to the 12-metre-long Hohengenkingen Cave – or ‘castle cellar’ in the local vernacular. Excavations of the cave in 1956 discovered the remains of prehistoric pottery.

All numbers in parentheses correspond to Günther Schmitt’s Castle Map (1991)

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First steps – Current State of the Project

The journey has begun. At this point, we will continuously update you with the status of the project, new insights, progress, dead ends, and – hopefully not often! – steps backwards

The Plan

The foundation for every plan is: a map. As of yet, there hasn't been one for our castle – at least nothing exact – neither for the mountain on which it is built nor for the ruins.

In winter 2021, the project had not even been formally established; but then it began with a bang:

For three months, between November 2021 and January 2022, a group of 70 students from the Biberach University of Applied Sciences took on Hohengenkingen. On multiple occasions under the direction of Professor Dr.-Ing. Hans Quasnitza, the students ascended the mountain to survey its peak and the extent of the castle using various surveying techniques. Their blueprint was to be the foundation for all future research projects.

They carried with them total stations, laser scanners, and optical measuring devices. Beforehand, Professor Quasnitza had divided the terrain including the ruins into individual 70 x 70 metre areas of measurement for the students. He hammered stakes painted red and white into the forest floor and drove red nails into the crags to mark the areas. In groups of four, the students measured in the surface section by section.



They surveyed the terrain with different processes: one is tachymetric and the other is terrestrial 3-D laser scanning. Measuring using satellite-assisted GPS/GNSS is not possible due to the density of the forest on the mountain. Too many trees block the signal.

Using the tachymetric method, the team measured in individual points throughout the area and the altitude of the wall remnants to compile a layout of the terrain. There are always three position coordinates: the respective position in the east-west direction, the north-south direction, and the height above sea level. For this, Professor Quasnitza uses a global coordinate system that divides the entire surface of the Earth (with the exception of the polar caps) into 6°-wide vertical zones, or UTM (‘Universal Transverse Mercator).

The first step: a student places the total station on its tripod on a spot that allows for a large field of vision. Hohengenkingen does not make this an easy task, the group from Biberach often had to fight through dense vegetation. They were often forced to relocate the total station three or four times per section.

The second step: another student heads out with the reflector staff. They place it on top of the points that need to be measured in. The reflector staff contains a prism, a type of mirror. To measure in the respective point, the total station sends out a short light signal to the reflector, an electromagnetic wave, that the

reflector then sends it back to the total station. The tachymeter can calculate the distance using the measured travel time and the known propagation speed of electromagnetic waves (300,000 kilometres per second), which is always the same. Using this method, the students were able to measure in hundreds of points in a single day.

The laser scanner measures in an even more detailed manner. The downside to this method is that the laser scanner cannot differentiate between vegetation and the actual surface. This technology has only been on the market since the mid-90s. The laser scanner scans Hohengenkingen's terrain, which is at times very steep, every five centimetres. It measures with millimetre precision, measures one million points per second, and creates a scatter diagram out of the data that allows the terrain's shape to be calculated.

The result of the students' work is, among others, an impressive 3-D model that appears so plastic, as if someone cast the hilltop and the ruins into a casting mould. This model is an important tool for researchers. The laser scan has mapped the terrain in such detail that, depending on the archaeological question, any number of sections through the entire site can be generated.

The survey of Hohengenkingen – which would have cost 10,000 EUR on the free market – served as the seminar's final assignment of the Biberach University of Applied Sciences. The State of Baden-Württemberg covered the students' travel costs.

The Enigma Stone – the first ^{14}C measurement.



In April 2021, during one of the first site inspections with the advisor from the State Office for Monument Protection of Baden-Württemberg, Dr Mathias Hensch (now district and city archaeologist in Gifhorn), a piece of mortar that had recently broken off of the wall of the keep struck our attention. What

makes this piece of mortar special is the wooden fragment that had survived for centuries inside of it. The wood likely found its way into the mortar during the mixing process. The wood is carbonised, or in other words: charcoal. Burn marks are also visible on the mortar itself. Hensch recommended that 'we could attempt to have this piece's age determined via 14C'. Hensch had the 20-cm-large mortar fragment sent to the Ceza-Institut, the 'Curt-Engelhorn-Zentrum Archäometrie' in Mannheim.

In 1960, the American Willard Libby received the Nobel Peace Prize in Chemistry for the development of the 14C method.

All organisms absorb carbon throughout their lifespan. Carbon comes in three varieties, as three different isotopes that have different numbers of neutrons: 12C, 13C, and 14C, with 'C' standing for carbon and the associated number standing for the total number of protons and neutrons, respectively. If a living being dies, it stops absorbing 14C from that point on and the 14C then begins to decay. 12C, however, remains unchanged. The age of the object can now be determined from the ratio of 12C and 14C. If the proportion of 14C is only 50 % of today's proportion, one can conclude that since the end of the object's carbon uptake, its half-life has passed, i.e., 5,730 years.

The object, however, must not be older than 50,000 years as the amount of 14C is simply too small to be able to determine its age.

The older an object is, the less precisely its age can be determined by 14C. With this and other methods of radioactive age determination, the age can never be determined exactly, but only approximately.

But the results of the Mannheim laboratory cannot be understood with those measurement inaccuracies. The piece of wood in the mortar from Hohengengen dates – according to the measurement – from the third century or early fourth century CE. That is, from late antiquity, a time when the Romans had just retreated from this part of Baden-Württemberg. This begs the question: are the beginnings of the castle about a thousand years older than thought? So far, there are no further indications of this.

At first, the State Office for Monument Protection assumed that there was a measuring error, but another examination of the data proved that the initial result was correct. As long as no further finds from late antiquity can be recovered, the age of the charcoal, according to Hensch, 'cannot be explained archaeologically'.

We thus christened the mortar fragment as:

The Enigma Stone



How this journey could move forward. A prospectus of the planned research project, the funding for which we will now solicit

We want to continue to approach the castle very cautiously. Our next projects still won't disturb the subsoil – at the most, we will just scratch the surface.

The basis for further research has been laid out: we now have an exact terrain model of the castle hill. No matter what we decide to do in the area in the future, we will know exactly where we are.

After the survey of the castle hill, we wanted to measure in the castle's remains. This will be done wall by wall, pit for pit. Every step will be documented.

As one of the next steps, we wanted to take mortar samples. In this way, we can learn as much from the surface as possible without even needing to stick a spade into the dirt. We hope that the mortar samples could already hint at multiple construction phases.

In late autumn 2023, at least according to our plan, we will devote our attention to the soil – albeit again without using a spade. We want to examine the subsoil with magnetometers and ground-penetrating radar in an effort to get to know it better. Do the remains under the castle match what the surface suggests? The use of geophysical measuring techniques instead of shovels is a relatively young practice in archaeology. Geophysical measurement can determine whe-

re the subsoil has been backfilled, where there have been heat events (possibly even fires), where debris is to be expected, and where the soil is compacted.

The first trial excavations have been planned for the third step. These will likely take place in early 2024 and will be carried out as field schools by the University of Tübingen.

The detailed project outline from Dr. Sören Frommer.

Archaeological Excavation of the Castle

What do we know thus far?

How long Hohengenkingen Castle was inhabited in the High and Late Middle Ages can probably be determined (quite reliably) from the catalogue of surface finds published in 2006 by Christoph Bizer, the Oberlenningen castle researcher and honorary appointee for the State Office for Monument Protection who died in 2018. In the winter of 2021/22, inspired by our project, the finds from that time were sifted through again as part of a student exercise at the University of Tübingen. More than 400 sherds of clay vessels and stove tiles, as well as individual glass and metal finds, indicate occupation of the castle between the time 'around 1200' and the last third of the 14th century. Hohengenkingen is one of a total of three Genkingen castles, some of which overlap in time and all of which were probably originally connected with the lower noble family of the Lords of Genkingen. In the 12th century, they were ministeriales of the Counts of Achalm and Ronsberg and later ruled the village in their own name. The castle complex, which was probably extended in several phases, suffered at least one major fire, as evidenced by burnt wall stones, mortar fragments, and roof tiles found among the rubble. It is unclear whether this fire led to the abandonment of the castle.

The castle ruins were first described around 1900 by the famous Swabian castle researcher Konrad A. Koch, and more recently by Georg Schmitt. So far, no archaeological investigations have been carried out at Hohengenkingen.

Why is this castle so interesting?

Although the castle was evidently used as a quarry after its abandonment and the above-ground structural remains have gradually fallen into decay, there is some evidence that the archaeological features beneath the surface are well preserved. In many areas of the castle, the historical level seems to still be intact or lies protected and buried under rubble. If the castle was indeed not rebuilt after burning down, this is all the more true. Under collapsed walls and roofs, situations may have been preserved that still convey the castle's condition prior to destruction.

A comparative example is provided by the rich find material from the ministerial castle of Ror near Hohenzollern Castle, located roughly 25 km southwest of Hohengenkingen. This castle was destroyed in 1311 in the aforementioned war against Württemberg and was not rebuilt afterwards. It would be temporarily possible that Hohengenkingen was also destroyed in another war against Württemberg – in the War of the Swabian Cities between 1377 and 1388, in which the nearby (Alt?)-Lichtenstein Castle was also destroyed. Much of the ministerial castle of Ror, which was excavated by amateurs in the 1950s, can no longer be satisfactorily reconstructed due to the lack of scientific documentation. At Hohengenkingen, on the other hand, we can draw on unlimited methodological resources.

Just as interesting as the circumstances of the castle's abandonment are those of its construction. The presumed construction 'ca. 1200' roughly coincides with the point in time when the people of Genkingen finally appear as servants of higher-ranking lords. It is possible that the construction of the castle is related to this period and thus symbolises the emergence of an independent local lordship of Genkingen.

The period before 1200 could also become an area of focus. Admittedly it is unlikely that there was an older residential use of the mountain, this should otherwise be visible in the large number of surface finds. Yet due to the castle's outstanding topography – Hohengenkingen offers commanding views of the surrounding countryside on the ridge of the Swabian Jura and controls several historic ascents in the vicinity – older 'strategic' uses of the mountain cannot be ruled out.

Finally, it is helpful that Hohengenkingen's period of occupation was relatively short at 200 years. Expansion and conversion phases will be quite easy to identify as large-scale re-conceptualisations of the site tend not to have taken place. It will be possible to assign a concrete meaning to many buildings and areas based on the archaeological finds. The aim would be to understand the 'entire organism' of Hohengenkingen Castle with its many functions – how it was conceived and how it evolved.

... in detail?

Survey

An important step towards creating a modern working basis has already been taken: through the mediation of the State Office for the Preservation of Monuments, students from the Biberach University of Applied Sciences conducted an extensive surveying exercise under the direction of Prof. Quasnitza. The core of the castle was recorded three-dimensionally via laser scanning and transferred to a contour line model. Remains of walls, rubble structures, and paths were measured by total stations. In addition, the State Office for Monument Protection provided us with surface data of the mountain and its sur-

roundings, which were obtained from the air by LiDAR (light detection and ranging) measurements. These can be used in a Geographic Information System (GIS) to reconstruct, for example, historical visual relationships. The height of the reference points can also be varied: a 1.80 m tall person on the ground has a different field of vision than a person standing guard on a 20-m-high tower.

Archaeological Inventory

An archaeological survey is planned for February/March 2023. While no excavation will be carried out, fieldwork will be limited to the local removal of vegetation and the brushing off of superficial dirt. Doing so will require taking advantage of the short period after the winter snow melts and before the vegetation begins to sprout to lead a small team up to the castle to record all of the structural remains, rubble structures, pits etc. to create three-dimensional digital models or Structure from Motion (SFM) models. This is done by taking numerous overlapping photos of each object, which are taken as perpendicular to the object as possible. If access is difficult, a drone or telescopic pole is used.

The photos are processed by special software to create a 3D model that is geo-referenced via measuring points attached to the object (absolutely located in space). From this, any dimensionally accurate plan views can be created – even at a later date. The top view (planum) and views from the various sides (profiles) are of particular importance to us.

After the photographic documentation is complete, which also includes traditional photographs with a north arrow, measuring sticks, and a photo board, we document our 'stratigraphic assessment' per video.

This involves the team discussing how individual features (walls, construction joints, plaster layers, fixtures, rubble complexes, fire events, pits, occupation layers, etc.) can be identified and distinguished from each other within the object in question and how they relate to each other in terms of stratigraphy (what is older, what is younger?).

Arguments and counter-arguments are exchanged, a well-founded contradiction is often more helpful than a meagre agreement. A good video allows us to make changes to the features afterwards – for example, by comparing sediments in front of the camera or by changing the boundaries of the features during cleaning. After the video discussion, it is time to begin the written documentation. This is done by identifying, classifying, and describing each individual feature, to which we now assign a serial number, and determine their temporal relationship to one other. This information, along with the features' stratigraphic boundaries, is sketched out on a photo with an iPad. Our plans are then generated on the computer from this sketch and the corresponding SFM documentation. Descriptive and spatial parts of the documentation are linked together as in a database.

Mortar samples are also taken from all suitable walls and rubble layers. This allows for special attention to both a reliable assignment to the feature but also to the least possible interference. Pieces of mortar can be analysed particularly well if they reach a certain size (from approx. 2 cm) and remain intact. In the lab, the pieces, preferably in the area of fresh fractures, are serially photographed with a commercially available USB microscope. Using the optical and material properties, similar pieces are grouped together. Even if these groups do not reflect the historical mortars one-to-one, they can make a very valuable contribution to the analysis of the construction phases.

The aim of the archaeological inventory is the complete documentation of the relevant above-ground structures, combined with the first dimensionally accurate plan of the features of the entire complex. The chronological sequence of abutting walls and the groups formed in the mortar analysis will be used to create a preliminary construction phase plan for the entire site.

Survey/Prospecting

Despite the lack of excavation during this stage, surface finds from the castle's occupation, such as dishware and oven ceramics, possibly also glass, metal, and others, are still collected and measured in if possible. This does not, however, pertain to historical building materials such as bricks, mortar, and even burnt clay (e.g., from burnt half-timbering) due to the sheer number of such finds. Given that these finds occur en masse, they are only selectively recovered to develop precise recording strategies for future excavations. This requires clarifying as to which criteria and in which way we will successfully document these mass-find genera in the future. In the context of the layers that we will have carefully excavated, these building materials have important significance: they show us how the respective layer or backfill was formed and with which building phases it could be connected.

Together with students taking part in a special university course planned for February/March 2024, we plan to systematically investigate the adjoining slopes over a large area and without gaps by walking and mapping individual finds and accumulations of rubble. This will allow for an understanding of how the castle decayed and delineated areas with a particularly good chance of elucidating the historical use of the castle through the frequency or composition of finds.

Furthermore, data from the LiDAR image taken of the entire mountain allows us to examine individual sites from various angles as a 'digital terrain model' (DTM). These may be the remains of old roads, quarries, mining pits, or technical facilities – or natural, geologically formed structures. Where we find relevant structures, they are documented in detail with the help of the aforementioned SFM documentation.

In addition, we want to use geophysics to explore the subsurface at suitable locations – possibly as early as autumn 2023. This means that we can non-invasively record differences in the magnetic field that can, for example, identify backfill structures or burn sites. Additionally, the underground rubble or walls can be detected by their electrical conductivity. These methods can provide important information about structures that are not recognisable above ground. While this information is usually ambiguous, it shows us where future excavations could be particularly interesting.

Archaeological Field Schools

After evaluating the results of the survey, the University of Tübingen will conduct an archaeological field school in the summer of 2024. The location and scope of the field school will be agreed upon with the State Office for Monument Protection. In addition to our historical questions, conservation measures may also play a role in the selection of the areas that will be investigated. This would be done prior to the start of any conservation work on any preserved structures.

In principle, quality and care take precedence over speed and surface area in field schools given that it is also a part of the students' training. Excavations always destroy a part of the historical source in the ground, despite all the knowledge gained from them.

In addition to the (often) considerable quantities of archaeological finds, excavations produce many forms of complex documentation. The historical value of this documentation can only be fully achieved through a comprehensive evaluation process. All documented features must be brought into a consistent model of their chronological sequence. The finds from the different categories must be dated and their form and function understood. The historical development of the excavated layers and backfills is deduced from the find associations (the common occurrence of different find categories in a find or find complex). An overall understanding of the castle and its history is then developed and contrasted with what can be learned from written sources. Student theses will play an important role in the accomplishment of these tasks, which are much more time-consuming than the underlying excavation work.

Interdisciplinary Courses

Properly conducted archaeology is always also a historical science. Accompanying the archaeological research at Hohengenkingen, interdisciplinary courses are to be held at the University of Tübingen in which future archaeologists and historians will work together on topics related to the castle and its historical surroundings. The aim here is to get to know the sources and methods of

the other subject and to be able to successfully clarify overlapping questions. Within the framework of a regional studies thesis, the history of the Lords of Genkingen and their involvement in the historical processes of the High and Late Middle Ages will be investigated through archival research.

Sören Frommer

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Who we are

We are a group of people from various types of education, backgrounds, and disciplines who are united by the belief that the scientific research and preservation of historical monuments in Germany cannot be left to the state alone. That task is too colossal for the state.

We are archaeologists from various disciplines, historians, journalists, media professionals, engineers, local and regional politicians, and even a medical supply store clerk. We are not a local historical society. We see ourselves as a platform for the realisation of research projects and scientific communication. Never before has the social discussion of science been so important as in our time. Admittedly, researching a remote castle ruin is only a small contribution – but a contribution that we try to make.

Thomas Faltin

Journalist, beekeeper, and author of hiking guides.



Thomas Faltin, 59, editor, comes from the Hohenzollern countryside. Studied history, doctorate. For more than two decades, he has worked for the major Stuttgart newspapers and is concerned with talking to people's consciences about their carbon dioxide emissions and saving black-bellied hamsters from extinction. In his spare time, he often roams around the Swabian Jura and likes to do so at the most ungodly of hours – such as catching the 5 a.m. sunrise. A camera is always with him. This has resulted in several illustrated books and hiking guides. His love of history and the Swabian Jura are combined in the best possible way in his commitment to the preservation of the Hohengeningen ruins. In addition, he is currently the lord of 14 bee colonies. He lives in Nürtingen.

Uwe Morgenstern

Mayor, engineer, and (almost) always in office.



Uwe Morgenstern, born in Sonnenbühl in 1965. After training as a craftsman and working as a gas and water fitter, he studied utility engineering in Esslingen. He then worked for 15 years as a project engineer in Technical Building Equipment for municipal construction projects. Since 2010, mayor of his home municipality of Sonnenbühl. Even as a child, he went on excursions around the ruins of Hohengenkingen and is still fascinated by this enigmatic place.

Prof. Natascha Mehler

Medieval archaeologist, tenured professor, and frequent traveller.



Natascha Mehler, Professor of Medieval and Modern Archaeology at the University of Tübingen. Well-travelled, always under the spell of castles. Grew up in Bavaria, then went to Austria, Italy, Norway, and Iceland to study and work; doctorate in Kiel, habilitation in Vienna. She owes her choice of profession to the ruins of Kürnberg Castle, which she chose as her playground as a child (which her parents were not very fond of). She is excited about the model project on Hohengenkingen Castle, because here research, monument preservation, citizen participation, and scientific communication go hand in hand.

Dr. Sören Frommer

Archaeologist, castle expert and youth tutor.



Dr. Sören Frommer, born: 1970, archaeologist. Based in the Tübingen area since his civil service and university studies, he is not only an archaeologist specialising in the Middle Ages and modern times, but also a youth and at-home tutor. He lives in Nehren with his wife and two foster daughters. Castle enthusiast. Owner of half of the former local castle, the remains of which are hidden in Frommer's garden. What fascinates him about archaeology is the task of extracting history out of dirt – which is just as difficult as it sounds. Accordingly, he dealt with precisely this question in his dissertation 'Historical Archaeology'. He also specialises in the medieval nobility and its significance for settlement history. The Swabian Jura and its foothills are of particular interest here. In the High Middle Ages, the region was a kind of 'melting pot' for the emergence of high noble families, some of which had empire-wide significance.

www.historische-archaeologie.de

Ulrich Stolte

Journalist and poet



Ulrich Stolte is an editor at the Stuttgarter Zeitung and occasionally writes for the 'Zeit'. The 58-year-old comes from Plochingen, studied with Walter Jens, and did his doctorate on the justly forgotten poet Johann Jakob Thill from Stuttgart. Apart from literature, he is interested in the natural sciences, mathematics, and history. Here, not only medieval poetry but also medieval archaeology are the foundation of his research, especially the castles in the Swabian Jura. From time to time, he can be found on poetry stages throughout the region, such as those in Esslingen. Winner of the Nikolaus Lenau Prize. Stolte learned his trade at the Geislinger Zeitung, was an editor at the Schwäbisches Tagblatt Tübingen for eight years, and then joined the Stuttgarter Zeitung.

Ulrich-Stolte.de

Josef Schmaus

Managing Director of outline, the agency that 'created' the website.



Josef Schmaus has been a passionate sandcastle builder since childhood and remains so to this day. Seriously, he liked the idea of not treating the topic of the 'castle' as a renovation object or in the sense of historicising legends so much from the very beginning that he not only offered his personal advice as a brand consultant, but also the labour of his small team of designers, programmers, and other creative people at the service of the digital castle presentation completely free of charge. Et voilà, this ambitious project can now be presented with an appropriately modern website on all portable and non-portable devices.

outline.de

Wolfgang Bauer

Reporter.



Wolfgang Bauer, born 1970, reporter. Born in Hamburg. Grew up in both the far north and south of Germany. Regular soldier, conscientious objector. A-levels at night school, during which he was a tour guide at Lichtenstein Castle, a postman, and a rubbish sorter. Studied in Tübingen. Started studying Islamic Studies, later Geography, then History. Since 2011 at DIE ZEIT. Reporter for the ZEIT editor-in-chief. Author of several books. Enthusiastic time traveller. Fascinated by the ruins of Hohengenkingen for almost 40 years.

Manuel Hailfinger

Member of the State Parliament.



Manuel Hailfinger, born in 1982 in Reutlingen, grew up very close to the 'castle' in the district of Undingen in the municipality of Sonnenbühl, where he currently lives. After his A-levels, completing his insurance training, and studying law, he worked as a legal advisor. In the state parliament elections in March 2021, he was elected to the state parliament of Baden-Württemberg in the constituency of Hechingen-Münsingen. In his honorary office, he is chairman of TSV Undingen, chairman of the Reutlingen sports district, chairman of the Sonnenbühl tourism association, and a member of the board of the Swabian Jura Biosphere Association.

Christian Kübler

Historian specialising in written source material.



Christian Kübler, born 1980, historian. Born in the Black Forest, grew up in Upper Swabia and moved to Tübingen to study history and archaeology. There he noticed that history not only took place in ancient Rome, France, or the USA, but also right on his own doorstep. This meant that he had found his research focus for the rest of his studies at the Institute for Historical Regional Studies and Ancillary Historical Sciences. There, he did his doctorate with Professor Sigrid Hirbodian on the development of high medieval noble castles using examples from the Swabian Jura. Castles are an exciting topic because they lend themselves very well to interdisciplinary research, and the more disciplines involved in such projects do not spoil the broth, but sweeten it. Hohenkingen is an exciting topic that once again illustrates how little we know about supposedly well-known history(s).

Dr. Michael Kienzle

*Archaeologist, castle researcher,
and intermediary.*



Born 1986, archaeologist and historian. Born in Nürtingen, grew up in the foothills of the Jura, spent a lot of time in the castles of the Swabian Jura in his youth. Studied medieval history and archaeology at the University of Tübingen, since then living in Tübingen. Doctorate at the Institute for Prehistory, Early History and Medieval Archaeology on medieval noble residences in the Swabian Jura. For several years intensively active in the field of castle and cultural landscape research as well as public relations and mediation. Initiator of the:

greifenstein-projekt.de

Dr. habil. Lukas Werther

*Medieval archaeologist, interdisciplinary,
and Upper Bavarian.*



Born 1982, archaeologist. Born in Upper Bavaria, socialised in Franconia and Swabia. An enthusiastic excavator and bookworm since early childhood. Studied archaeology of the Middle Ages and Modern periods, building research and building history, prehistory, and early history and geography in Bamberg, doctorate and habilitation in Jena. Since 2019, researching and teaching at the University of Tübingen, not least on topics relating to castles and nobility. Full of expectations as to what secrets and history(s) the ruins of Hohengerkingen have in store for us.

Donations and Support

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We cannot accomplish anything without your support.

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