# LOEWE Excavations between Vogelsberg and Rhön Mountains in Eastern Hesse: an Overview

# Introduction

Within the LOEWE project "Prehistoric Conflict Research - Bronze Age Hillforts between Taunus and Carpathian Mountains", field investigations play an important role in acquiring new data about European hillforts, in particular in the two selected regions: Romania and the German state of Hesse.<sup>1</sup> In this paper, we will present the main results of the surveys and excavations conducted in the eastern part of Hesse, specifically in the county of Fulda, between the Vogelsberg and Rhön mountains.<sup>2</sup> Four fortified sites have been the object of geophysical surveys, field surveys and excavations: Stallberg and Kleinberg in the Rhön massif, Haimberg near Fulda, and Sängersberg in the Schlitz valley (Fig. 1).<sup>3</sup> All of these sites are known for their stone fortifications, but they are dated only approximately to the Iron Age.<sup>4</sup> Various evidence indicates that they may have been occupied during the Bronze Age, which is why they constitute the focus of our field investigations in the region.

Our main issues in this project concern especially the function and role of such fortified places within a settlement framework and the political power structure of society during the European Bronze Age (ca. 2200–800 BC). The presence of fortifications on these sites also raises the question as to whether or not they were linked with warlike events. Finally, we searched for the presence or absence of evidence for specific activities such as metalworking and we examined the possibility that such places could have controlled trade routes. All of these aspects are investigated within interdisciplinary studies in order to better understand the rise of such sites during the Bronze Age. Obviously, each excavated site had its own issues, which we will present and answer insofar as possible.

# Stallberg

Stallberg is situated in the Rhön mountains, 10 km north-east of Hünfeld, close to the border with Thuringia. With a height of 553 m, it is the second tallest summit of the *"Hessisches Kegelspiel"* and is classified as protected landscape since 1973. It belongs to the Rhön Biosphere Reserve since 1997 and has the particularity of having been a NATO exercise area during the Cold War. The top of this basalt mount is surrounded by a circular fortification of clink-stone with an inner area of 6 ha. During two campaigns of excavation, i.e. 9 weeks, we investigated 164 m<sup>2</sup>. The purpose of this fieldwork was to date the fortification on the top of Stallberg and to search for evidence of settlement or of other particular activities.<sup>5</sup>

The difficult ground conditions on the mount complicated the understanding of the site since all archaeological features have been destroyed by soil erosion, except for one pit behind the wall. A total of 14 trenches were excavated at different locations inside the fortification and J. Vonderau's old trench cutting the 900 m long wall was reopened (**Fig. 2**). The new profile through the wall did not show any evidence of wood features, such as posts, but long and narrow clink-stone was used exclusively at the front of the fortification wall. The rest of the structure was built by loose stones of various sizes. These observations seem to indicate that the rampart was built with a

<sup>&</sup>lt;sup>1</sup> Hansen/Krause 2018a.

<sup>&</sup>lt;sup>2</sup> For more information about the county of Fulda during prehistoric times, see Vonderau 1931 and Müller 2017.

<sup>&</sup>lt;sup>3</sup> Blitte/Verse/Krause 2018.

<sup>&</sup>lt;sup>4</sup> Verse/Grasselt 2014.

<sup>&</sup>lt;sup>5</sup> The field surveys as well as the first excavation campaign was presented during the first LOEWE conference in 2016 (Blitte/Verse 2018), which is why the focus here is on the main results from all of our investigations. For more information about previous research on Stallberg, in particular from J. Vonderau, please refer to this previous paper.



Fig. 1 Prehistoric hilltop occupations in the county of Fulda (LOEWE project; EU-DEM v.1.1 © European Union)



Fig. 2 Plan of Stallberg and location of the trenches (LOEWE project, topographical background after Gensen 1985)



Fig. 3 Stallberg: a Front of the wall with long and narrow clink-stone (LOEWE project, photo by B. Voss);b Profile of the fortification in the re-opened Vonderau trench (LOEWE project, photo by H. Blitte)



**Fig. 4** Stallberg. Typical sherds of the Michelsberg culture: *Arkadenrand* and *Ösenkranzflasche* (LOEWE project, photo and drawing by B. Voss)

slight incline, starting inside the fortified area that ended with a vertical face made of clink-stone (**Fig. 3a-b**). Interestingly and contrary to other fortified sites in the region, Stallberg does not show any traces of fire.

During both campaigns (2016, 2017), numerous finds dating from the Late Neolithic, in particular some typical elements of the Michelsberg culture were found. Among them, two polished axes<sup>6</sup> of amphibolite constitute one of the most impressive discovering from the site.<sup>7</sup> Some flint flakes and blades were also collected. Ceramic sherds of *Ösenkranzflasche* (kind of hanging bottles) and rims decorated with arcades (*Arkadenrand*) are easily identifiable and confirm without any doubt the use of the mount during the fourth millennium BC (**Fig. 4**). This statement is a very interesting new information for the Rhön region, where no other evidence of the Michelsberg culture is attested.

The metal ages, in particular the Late Bronze Age and the first Iron Age, are represented as well through fragments of pottery. Nevertheless, the non-specificity of these sherds doesn't allow precise dating since this kind of appliqué rib with incising has a long lifetime as well as the inclined rims (**Fig. 5**). In addition, the small knife found accidentally on the mount in 2001 belongs to this period. Finally, the second campaign of ex-

<sup>&</sup>lt;sup>6</sup> A third polished axe was found, but this one dates to the end of the Late Neolithic and does not belong to the Michelsberg culture.

<sup>&</sup>lt;sup>7</sup> Blitte/Verse/Krause 2017; Blitte/Verse 2018.



Fig. 5 Stallberg. Sherds of the Metal Ages: inclined rims and appliqué rib with incisions (LOEWE project, photo and drawing by B. Voss)

cavation unearthed pieces of medieval ceramic, matching the radiocarbon dates from the first campaign (see below).

Charcoal but also some carbonized seeds were collected and dated with the radiocarbon method. The results match with most of the artefacts found at the site since three main periods are attested (**Fig. 6**): the Late Neolithic (fourth millennium BC), the Metal Ages and the Late Middle-Age (12<sup>th</sup>-13<sup>th</sup> centuries AD). The Bronze Age is represented with an early date; however, no corresponding material has been found. The first Iron Age date could match with the ceramic presented above.

To sum up, Stallberg was sporadically used from the Late Neolithic to modern times with two main periods during the fourth millennium BC and the 12<sup>th</sup>-13<sup>th</sup> centuries AD. The Metal Ages are weakly attested. Unfortunately, it was not possible to date the fortification because of the lack of relevant dating material in its structure. No cultivated plants have been identified, excluding the possibility of having a permanent settlement on the top of the mount. The reason why such an impressive wall of clink-stone was erected is still open but the expectation of a conflict seems to be a plausible hypothesis.



Fig. 6 Stallberg. Radiocarbon dates of charcoals and seeds found during the excavations (calibrated with OxCal v.4.3) (LOEWE project)

# Kleinberg

Only 3 km north-east from Stallberg, Kleinberg is also part of the "*Hessisches Kegelspiel*" and is 525 m high. A kind of fortification of clink-stone is known on the top, embracing the upper plateau with an area of around 1 ha. 67 m<sup>2</sup>, divided into four trenches (**Fig. 8**), were excavated during a four-weeks-campaign. The main goals of the investigation were to date the fortification and to try to define its function: was Kleinberg only used sporadically or on the contrary settled for a long time? Is there any evidence of specific activities?

The excavation conducted within our project in 2017 is the first ever on the Kleinberg. In the 1980's and 1990's W. Hellwig and K. Sippel organised field surveys at this place, leading to the discovery in 1988 of a fragment of a bronze spearhead, which was identified as an Urnfield object (**Fig.** 7). This clue let us think of the possibility of having a Bronze Age fortification at Kleinberg and invited us to investigate this site. In 2016 we started



Fig. 7 Kleinberg. Fragment of a bronze spearhead found in 1988, Urnfield period (photo: Museumslandschaft Hessen in Kassel)

with a field survey on the plateau and found many iron objects and ceramic sherds from the second Iron Age as well as from the Middle-Age (from the 13<sup>th</sup> century AD onwards).<sup>8</sup>

<sup>8</sup> Lotz/Rößner, 2017.



Fig. 8 Plan of Kleinberg and location of the trenches (LOEWE project, topographical background after Gensen 1985)



Fig. 9 Kleinberg. Typical sherds with comb stamping of the La Tène period (LOEWE project, photo by B. Voss)

The similar ground conditions with Stallberg lead also at Kleinberg to a lack of archaeological features since all the cultural layers disappeared because of the erosion process. In order to determine whether the wall of clink-stone was constructed by people or resulted from a geological process, we set up two trenches, one on the north and one on the east. The documented profiles in the second and third trenches did not provide any firm evidence of anthropic construction so it is an open question if the wall is man-made. Finds of several ceramic sherds confirm the dates of possible settlements on the top of Kleinberg already shown by the survey: Early and Middle La Tène (**Fig. 9**), Late Middle Age and modern times. Many seeds of cereals and leguminous plants have been identified. Some of them were carbonized and could be dated: surprisingly, the oldest date belongs to the Urnfield period whereas the others to the first Iron Age.

Today, the time-span of the occupation on the plateau of Kleinberg thus appears to be from the end of the Bronze Age until modern times. The amount of pottery fragments, iron objects and the presence of cultivated plants allow the assumption of several settlement phases through time. Besides, the presence of a constructed wall to encircle the plateau is still unclear and would necessitate further excavations, which could not be organised within this project.

# Haimberg

Haimberg is located 5 km to the west of Fulda and is known as a Bronze Age vitrified fort of 1.3 ha with a fortification made of basalt on the top of a 400-m high mount. The investigations of J. Vonderau in 1900 and 1928 showed an occupation of the site from the Neolithic to the second Iron Age with an emphasis in the Late Bronze Age.9 Moreover, 43 bronze objects from that period were found during quarrying operations at the mount, which took place between 1907 and 1928. Most of the objects are ornaments and horse gear pieces, with typical forms dated to the end of the Late Bronze Age in the region, the so-called Wallstadt period (Ha B3) (Fig. 10). The presence of double disc fibulae (Plattenfibeln) in this possible hoard (one or many) testifies about contacts with the Nordic complex, whereas a phalera with a back loop shows contacts to the south since this type main distribution area is in Switzerland and France. These are strong indications that the Haimberg were affiliated with long-distance trade networks. A new investigation on the Haimberg within the LOEWE project was thus of big interest. Unfortunately, the summit of the mountain was totally destroyed by the quarry company (Fig. 11), so today there is no possibility left to investigate the former fortification and its inner area. The question of the vitrification of the wall, as reported by J. Vonderau, i.e. if it occurred during an armed conflict, cannot be answered. Nevertheless, we decided to dig outside the fortification in 2017 to search for settlement activities. The anomalies revealed by the geophysical survey were all proofed within a few days with small trenches: in each case, the result was negative since it appeared that these anomalies were all of geological nature. For these reasons Haimberg was no more relevant for further investigations within the LOEWE project.

### Sängersberg

Not far from the Vogelsberg and 18 km to the north-west of Fulda, Sängersberg is the last mountain investigated within our project. With a height of almost 500 m, this site was identified by J. Vonderau as a protohistoric vitrified fort like the neighbouring Haimberg. The two summits of basalt are surrounded by a 1.1 km long wall made of basalt and sandstone. The inner area of 6.7 ha was explored through geophysical prospection as well as field surveys using metal detectors. 168 m<sup>2</sup> were investigated during three excavation campaigns, totalling 15 weeks.<sup>10</sup> Our main goals at Sängersberg were to date the fortification, to observe whether it was burnt or not, and in case of a fire, try to determinate if this event happened during an armed conflict.

The first archaeological investigation at Sängersberg took place in 1901 when J. Vonderau organised a field survey in the wall area. He found a pottery fragment with grain-shaped incised decoration (Kornstichverzierung), which he attributed to the Bronze Age. For him, the presence of vitrified basalt slag together with some traces of charcoals was the result of a fire destroying the fortification. In the 1950's and in 1997, other field surveys were undertaken but non artefacts were discovered. Within our project Posselt & Zickgraf GbR surveyed more than 10.000 m<sup>2</sup> with a magnetometer: the results show clearly the course of the wall, which appears darker because of its slags (Fig. 12). Several field surveys with metal detectors found 220 metal objects, most of them from the NATOarmy use of the site in the 1970s (bullet casing or tent pegs for example). Nevertheless, a few bronze weapons were also discovered, namely one spearhead and three arrow heads probably dating from the Late Bronze Age.

During these campaigns, we focused our investigation in the north-eastern part of the site. Four trenches were excavated and an exposed profile of the wall near a forest path was documented (**Fig. 13**). The main results are briefly presented here: The wall of the fortification at Sängersberg was made of sandstone and basalt of different shapes and sizes – but also of wood, attested by the postholes discovered in trenches 2 and 3. Unfortunately the small size of these trenches doesn't permit a clear understanding of the inner structure of the wall. A width of

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<sup>&</sup>lt;sup>9</sup> Vonderau 1901; 1929.

<sup>&</sup>lt;sup>10</sup> Blitte/Verse/Krause, in press.



Fig. 10 Haimberg. Some bronze objects found during quarrying operations, Hallstatt B3 (photo by Z. Jez, Vonderau Museum Fulda)



Fig. 11 Haimberg. Quarry still in operation. It has destroyed the summit with the Bronze Age fortification (LOEWE project, photo by H. Blitte)



Fig. 12 Sängersberg. Areas of the geophysical surveys carried out by Posselt & Zickgraf GbR (LOEWE project, LiDAR-Scan Land Hessen)



Fig. 13 Plan of Sängersberg with its fortification wall (A), an ancillary rampart (B) and location of the trenches (LOEWE project)



Fig. 14 Sängersberg. Orthophoto from trench 2 showing the front of the wall built of large basalt blocks (LOEWE project)

3 to 4 m can be considered based on the documented profiles. The front of the wall was built with a line of large blocks of basalt, up to  $90 \times 42$  cm for the biggest ones, and can be observed in several trenches (**Fig. 14**). Pieces of vitrified basalt slag were found at different places of the site, although no evidence of fire exist: neither burnt posts nor burnt soil with large amounts of charcoals were discovered. Why the basalt is vitrified is still unanswered. The long trench 3 did not yield evidence of a defensive ditch, contrary to what would be expected in the case of such a large fortification.

The LiDAR scan of the site show what seems to be an ancillary, outer rampart at the north-eastern corner of the site. A light rise of the ground can be noticed in the landscape at that place so that we decided to excavate a part of it. Although the presence of postholes is uncertain, the amount of stones, which do not belong to the natural ground, results probably from a human construction. A section without stones could even be interpreted as a small ditch.

The highlights of the investigations conducted at Sängersberg are without doubt the finds of bronze weapons: 23 arrowheads and one spearhead (Fig. 15). Some other fragments of bronze artefacts were also found, but could not be identified. Most of the arrow heads are broken or bent, probably caused by their impact on the wall since all of them were discovered just in front of it. Different types are represented: 17 have a simple socket, 3 have a socket with a spur and 3 are tanged. Organic material was preserved in some sockets enabling C14 dating. Ceramic sherds have been collected in trench 3 in the inner area of the site. Very few diagnostic forms were found but their paste and making can be attributed to protohistoric times, maybe even to the Bronze Age.



Fig. 15 Sängersberg. The bronze spearhead and some bronze arrowheads found during the excavations (LOEWE project, photo by B. Voss)

The typology of the arrowheads as well as the radiocarbon dates from our investigations confirm that Sängersberg was at least in use if not occupied during the Bronze Age. While the forms of these small weapons show similarities with other the Late Bronze Age artefacts, the C14-dates are surprising (**Fig. 16**). They revealed that an armed conflict took place already at the transition from the Middle Bronze Age to the Late Bronze Age, approximately during the 14<sup>th</sup> century BC. The carbonized seed found in trench 2 dates from the

Middle-Age, more exactly from the 11<sup>th</sup>-12<sup>th</sup> centuries AD, so that the date of the construction of the fortification itself remains unclear. It could be contemporaneous with the Bronze Age conflict and reused through time, especially during the medieval period or being built during the Middle-Age.

With these remarkable finds, Sängersberg is an exceptional site in the region of Fulda, or for that matter Hesse, giving evidence of an armed conflict during the Bronze Age. Its early date, closer to the event of the Tollense valley<sup>11</sup> than to the transition

<sup>&</sup>lt;sup>11</sup> Terberger *et al.* 2018, 114 Fig.15.



Fig. 16 Sängersberg. Radiocarbon dates of charcoals found in the socket of the spearhead and the socket of two arrowheads as well as seeds found during the excavations (calibrated with OxCal v.4.3), focused on the Middle and Late Bronze Age (LOEWE project)

with the Iron Age, sheds new light on Bronze Age conflicts and the development of bronze weapons during this period.

## Conclusions

To resume, the investigations in eastern Hesse brought new information about the occupation of the region during prehistory. At Stallberg, no evidence for a long-time settlement was found, but a sporadic use from the Late Neolithic to the Middle-Age is confirmed. New data about the Michelsberg culture in the Rhön Mountains was collected and constitute a highlight for this area. At Kleinberg, although no structures were discovered, the amount of material found indicates that the site was settled during the Iron Age and up to modern times. Few finds could be dated to the Late Bronze Age so that the question of an Urnfield use is still open. At Haimberg, the exceptional high number of well manufactured bronze objects is exceptional for the region and testifies of long-distance exchange. Nowadays, no possibility remains for further archaeological field investigations for this Late Bronze Age fortified settlement. Sängersberg has a big potential for Bronze Age and conflict research. Even though the fortification could not be securely dated, the presence of a high number of bronze arrow heads and a bronze spearhead speaks for at least one occasion of armed conflict at the beginning of the Late Bronze Age, which is a premiere for the region. However, more investigations, in particular of the inner area, are needed to determine the function of the site.

# References

#### Blitte/Verse 2018

H. Blitte/F. Verse, Bronze- und eisenzeitliche Befestigungen in Osthessen. Umfeld und Entwicklung. In: Hansen/ Krause 2018b, 43–65.

#### Blitte/Verse/Krause 2017

H. Blitte/F. Verse/R. Krause, Der Stallberg bei Hünfeld-Kirchhasel – eine bronzezeitliche Höhenburg mit Befestigung? hessenARCHÄOLOGIE 2016 (2017), 65–68.

#### Blitte/Verse/Krause 2018

H. Blitte/F. Verse/R. Krause, Die LOEWE-Ausgrabungen auf Stallberg, Kleinberg, Haimberg und Sängersberg in Osthessen. hessenARCHÄOLOGIE 2017 (2018), 54–57.

#### Blitte/Verse/Krause in press

H. Blitte/F. Verse/R. Krause, Konflikt(e) am Ende der Bronzezeit auf dem Sängersberg bei Bad Salzschlirf und Schlitz. hessenARCHÄOLOGIE 2018 (in press).

#### Gensen 1985

R. Gensen, Die eisenzeitlichen Ringwälle auf dem Stallberg und dem Kleinberg: Führungsblatt zu den Befestigungen bei Hünfeld-Kirchhasel und bei Rasdorf im Landkreis Fulda. Archäologische Denkmäler in Hessen 49 (Wiesbaden 1985).

#### Hansen/Krause 2018a

S. Hansen/R. Krause, Prähistorische Konfliktforschung: Burgen der Bronzezeit zwischen Taunus und Karpaten. In: Hansen/Krause 2018b, 1–15.

#### Hansen/Krause 2018b

S. Hansen/R. Krause (eds.), Bronzezeitliche Burgen zwischen Taunus und Karpaten/Bronze Age Hillforts between Taunus and Carpathian Mountains. Beiträge der Ersten Internationalen LOEWE-Konferenz vom 7.–9. Dezember 2016 in Frankfurt/M./Proceedings of the First International LOEWE Conference, 7–9 December 2016 in Frankfurt/M. Universitätsforschungen zur prähistorischen Archäologie 319, Prähistorische Konfliktforschung 2 (Bonn 2018).

#### Lotz/Rößner 2017

C. Lotz/S. Rößner, Der Kleinberg zwischen Rasdorf und Eiterfeld-Kirchhasel (Lkr. Fulda). Kleines Archiv für die Archäologie im Landkreis Fulda 1, Ausgabe 2, 2016 (2017), 4-33.

#### Müller 2017

M. Müller, Die vorgeschichtliche Besiedlung des Kreises Fulda. Bearbeitet und ergänzt von F. Verse. Materialien zur Vor- und Frühgeschichte von Hessen 27 (Wiesbaden 2017).

#### Terberger et al. 2018

T. Terberger/D. Jantzen/J. Krüger/G. Lidke, Das bronzezeitliche Kampfgeschehen im Tollensetal – ein Großereignis oder wiederholte Konflikte? In: Hansen/ Krause 2018b, 103–124.

#### Verse/Grasselt 2014

F. Verse/T. Grasselt, Nördliche Rhön. Auf alten Wegen durch die Vor- und Frühgeschichte. Archäologische Streifzüge 1 (Wiebelsheim 2014).

#### Vonderau 1901

J. Vonderau, Zwei vorgeschichtliche "Schlackenwälle" im Fuldaer Land. 3. Veröffentlichungen des Fuldaer Geschichtsvereins (Fulda 1901).

#### Vonderau 1929

J. Vonderau, Bronzen vom Haimberg bei Fulda: eine Ergänzung zur dritten Veröffentlichung vom Jahre 1901.20. Veröffentlichung des Fuldaer Geschichtsvereins (Fulda 1929).

#### Vonderau 1931

J. Vonderau, Denkmäler aus vor- und frühgeschichtlicher Zeit im Fuldaer Lande. 21. Veröffentlichung des Fuldaer Geschichtsvereins (Fulda 1931).

# Hélène Blitte, LOEWE Excavations between Vogelsberg and Rhön Mountains in Eastern Hesse: an Overview

The eastern part of the state of Hesse in Germany between the Vogelsberg and Rhön mountains was one area included in the field investigations of the LOEWE project on "Prehistoric conflict Research – Bronze Age Hillforts between Taunus and Carpathian Mountains". There are several mountains in the county of Fulda with remains of protohistoric fortifications, which still need to be dated and further investigated. Our surveys and excavations took place successively at Stallberg, Kleinberg, Haimberg and Sängersberg. The results are briefly presented in this paper and will form part of more detailed forthcoming publications. At Stallberg and Kleinberg, no archaeological features had been destroyed by erosion, so sufficient material was found to date these sites. At Stallberg, two main periods of use have been documented by radiocarbon dates and corresponding artefacts: the Late Neolithic Michelsberg Culture and the Late Middle-Ages. At Kleinberg, radiocarbon datings indicate an occupation at the end of the Bronze Age and during the first Iron Age, whereas most of the ceramic sherds are typical for the second Iron Age and medieval times. Unfortunately, the fortification at the Haimberg is destroyed, and further excavation is not possible. Finally, at Sängersberg, the various field investigations brought forth evidence of conflicts during the Bronze Age.

# Hélène Blitte, Die LOEWE-Ausgrabungen zwischen Vogelsberg und Rhön in Osthessen: ein Überblick

Der Ostteil Hessens zwischen Vogelsberg und Rhön war ein Gebiet der Feldforschungen im Rahmen des LOEWE-Schwerpunktprogramms "Prähistorische Konfliktforschung – Bronzezeitliche Burgen zwischen Taunus und Karpaten". Im Landkreis Fulda liegen einige Berge mit Überresten von protohistorischen Befestigungen, die noch datiert und genauer untersucht werden müssen. Unsere Surveys und Ausgrabungen fanden nacheinander auf dem Stallberg, Kleinberg, Haimberg und Sängersberg statt. In diesem Artikel werden die Ergebnisse kurz vorgestellt, sie werden Bestandteil von detaillierteren, in Kürze erscheinenden Publikationen sein. Auf dem Stallberg und Kleinberg sind die archäologischen Befunde nicht durch Erosion zerstört worden, so dass genug Material zur Datierung dieser Fundorte vorhanden war. Auf dem Stallberg konnten zwei Hauptperioden der Nutzung durch Radiokarbondatierungen und korrespondierende Funde nachgewiesen werden: die spätneolithische Michelsberger Kultur und das Spätmittelalter. Auf dem Kleinberg bezeugen die Radiokarbondaten eine Besiedlung am Ende der Bronzezeit und während der ersten Eisenzeit, wohingegen die meisten Tonscherben typisch für die zweite Eisenzeit und das Mittelalter sind. Die Befestigung auf dem Haimberg ist leider zerstört, daher sind heute keine weiteren Ausgrabungen oder Nachgrabungen mehr möglich. Auf dem Sängersberg schließlich brachten verschiedenartige Feldforschungen Befunde für Konflikte während der Bronzezeit zutage.